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Lectures.

LECTURES

ON

TUMOURS,

Delivered in the Theatre of the Royal College of Surgeons of England.

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LECTURE IV.

Fatty tumours—General characters of fatty outgrowths—Structure of fatty tumours—Their varieties of form, as simple, lobed, involuted, and pendulous—Their capsules, or investing tissues, as an example of those generally connected with innocent tumours—The usual mode of occurrence of fatty tumours—Their usual seats—Changes of position—Rarer seats—Their development—Mode and extent of growth—Degenerations and diseases—Causes and general nature.

Fibro-cellular tumours—Distinguished from corresponding outgrowths—Their general and minute structure—Special examples—In the scrotum—In the labium, or by the vagina—Among muscles—In the sole—In the orbit.

Painful subcutaneous tumours—Their usual seats, structures, and relations to fibro-cellular and fibrous tumours—Their painfulness—Its supposed relation to nerves enclosing, or adjacent to, them—Differences between these tumours and the "neuromata"—Probable neuralgic nature of the pain—General observations on neuralgia in tumours.

FATTY TUMOURS.—Among the solid tumours, the first that may be considered is the fatty or adipose tumour,—the lipoma of some, the steatoma of others; the most simple in its texture; the most like the natural parts; the least liable to variations;—a morbid growth so well known, that I can scarcely hope to impart any interest to an account of it.

Among the growths commonly included as fatty tumours, we find examples of both the forms of morbid hypertrophies of which I spoke in the first lecture. There are both continuous and discontinuous morbid hypertrophies of fat—both fatty outgrowths and fatty tumours, more properly so called.*

* M. Lebert (Phys. Pathol. ii. p. 112) distinguishes the fatty tumours, according to their degrees of isolation, as *Lipoma circumscriptum* and *L. diffusum*.

The fatty outgrowth is thus described by Sir B. C. Brodie, in his well-known lecture upon fatty tumours. He says,—“there is no distinct boundary to it, and you cannot say where the natural adipose structure ends, and the morbid growth begins..... These tumours feel like fat, but they may be distinguished from common fatty tumours by their having no well-defined boundary, and by their being less soft and elastic. Such deposits may take place in any part of the body; but I have seen them more frequently in the neck than anywhere else.”* Doubtless the case will be familiar to you by which Sir B. Brodie illustrates this account,—the case of a footman, with an enormous double chin, and a great mass of fat extending from ear to ear, who was cured by the *liquor potassæ*.

I can add nothing to this account, except the mention of a singular case of fatty growth connected with the heart of a sheep.† The right ventricle is nearly filled with a lobulated mass of fat, distending it, and pressing back the tricuspid valve. The left auricle and ventricle are similarly nearly filled with fatty growths, and fat is accumulated on the exterior, adding altogether about twenty-five ounces to the weight of the heart. The textures of the heart itself appear healthy, though it is the seat of all these fatty growths.

The discontinuous fatty tumours, of which alone I shall now speak, present a tissue exactly or very nearly resembling the normal fatty or adipose tissue of the animal in which they grow. Certain differences may, indeed, be sometimes found between the fat of a tumour and that of the part in which it lies; such as the larger size of the tumour's cells, its less or greater firmness at the same temperature, and the usual crystallizing of the margarine; but I believe there are no greater differences than may be found in the natural fat of different parts of the same person.

It would be superfluous to describe the minute characters of this well-known tissue: it is only in its arrangement that the tumours have any peculiarity worth notice. It is, in all, composed essentially of clustered oil cells; but these are, in some tumours, placed in an uniform mass, smooth on its surface, and only obscurely partitioned; in others, arranged in oval or pyriform lobes, projecting on the surface, easily separable by splitting their fibro-cellular partitions: in some of these it may be dissected into thin layers, which are wrapped in each lobe, one within the other, like the leaflets of a bud. Moreover, any of these forms, whether “simple,” or “lobed,” or “involuted,”

* Lectures on Pathology and Surgery, p. 275.

† Mus. Coll. Surg., 1529.

may be either deeply imbedded in the tissues or "pendulous".

Fatty tumours are, I believe, always invested with a capsule or covering of fibro-cellular tissue; and of these capsules, since they exist with most of the innocent tumours, I may speak now once for all. The capsule, then, of such a tumour is usually a layer of fibro-cellular tissue, well organised, dry, and containing blood-vessels proportioned to the size of the tumour. It appears to be formed of the fibro-cellular tissue of the part in which the tumour grows, increased and often strengthened in adaptation to the bulk and other circumstances of its contents. It grows with the tumour, invests it, and at once connects it with the adjacent tissues, and separates it from them,—as, *e. g.*, similar fibro-cellular tissue does each muscle in a limb. Its adhesion to both the tumour and the parts around it is more intimate than that of its layers to one another; so that when such tumours are cut into, they may be dislodged by splitting the layers of their capsule, and leaving some of it on the tumour, and some in the cavity from which the tumour is extracted. This, at least, can be done easily unless the tumour has been the seat of inflammation, which may thicken the capsule and make all its parts adherent to one another, and to the tissues on either side of it.

In the capsule, the blood-vessels that supply the tumour usually first ramify. One principal artery, indeed, commonly passes straightway into the tumour at its deepest part, but the rest branch in the capsule, especially in any thicker parts of it that lie in the spaces between projecting lobes of the tumour. Hence, with the partitions of the tumour that are derived from the capsule, the blood-vessels pass into its substance.

The capsules of these fatty tumours may vary somewhat in thickness and toughness; and so may the partitions that proceed from them into the mass. They are usually very delicate; but they are sometimes thick and strong, and give a density and toughness which approaches to the characters of a fibrous tumour. To such examples of fatty tumours deviating from the common type, Müller* has assigned the name of *Lipoma mixtum*; and Vogel,† Gluge,‡ Rokitansky,§ and some others, call them "steatoma," and "lardaceous tumour" || (Speckgeschwülst).

* On Cancer, p. 153.

† Pathologische Anatomie, p. 179.

‡ Ibid.

§ Ibid. B. i. p. 283.

|| Müller also gives the name of *Lipoma arborescens* to the pendulous fatty processes with synovial membrane that are clustered about

Fatty tumours usually occur singly; but there are many exceptions to this rule. Two or three in the same person are not rarely seen, and a hundred or more may exist. Sir B. C. Brodie mentions such cases; and I am acquainted with a gentleman who has borne, for nearly twenty years, firm tumours, feeling like fatty masses, in the subcutaneous tissue of his trunk and all his limbs. They are usually stationary; but sometimes one grows a little, or one diminishes, or a new one appears.

The most frequent seats of fatty tumours are the trunk, and the parts of the neck and limbs that are nearest to it; but they may occur in any part where fat naturally exists, and they are not limited even to these.* It is, perhaps, impossible to say why they should affect one locality of fat rather than another. Their rarity in the mesentery and omentum, and the fat about the internal organs, is remarkable. I have never seen one in the recent state in any of these parts; and I know only two or three specimens in museums. One of these is in the College-Museum:† a bilobed mass of fat, enclosed in a thick capsule, is attached by a long pedicle to the intestine of an ox. In the trunk and limbs they appear least frequent in the parts in which the natural fat, though abundant, is subject to least variations in its quantity,—such as the palms and soles, and the bones; and they are very rarely, if ever, formed in parts of or near the trunk where no fat naturally exists, as the eyelids and the greater part of the scrotum. Fatty tumours have, indeed, been found in the scrotum;‡ and one very remarkable case is related by Mr. Lawrence and Sir B. C. Brodie: but, perhaps, such tumours have not *begun* to grow in the part in which they were at length found; they may have grown into it or shifted into it.

This shifting of fatty tumours is worth notice; for the fact may be used in the

chronic diseased joints. Sir B. C. Brodie describes a form of fatty tumour, which I have not yet seen, in which the tumour is covered with a double layer of membrane, like a serous sac.

* Müller (On Cancer, p. 153) describes one between the optic nerves and corpora albicantia; and Rokitansky (B. i. p. 282), including both the tumours and the outgrowths, refers to examples of *Lipoma* in the submucous tissue of the stomach, intestines, and bronchi; in the subserous tissue of the pleura, peritoneum, dura mater, and cerebral ventricles; and in the lungs, liver, and kidneys.

† No. 194. Another, referred to in Lecture I., is in the museum of St. George's Hospital. Other cases are related by Vogel (Path. Anat. tab. xxii. fig. 1; Gluge (l. c. Lief. viii.); Lebert (Phys. Pathol. ii. p. 105).

‡ And Gluge mentions one in the labium of a woman, seventy years old. It was pyriform; and looked like a hernia (Path. Anat., Lief. viii. Taf. i. fig. 1).

diagnosis of them when they occur in the groin or scrotum.

A patient was lately under Mr. Lloyd's care in St. Bartholomew's Hospital with a strange-looking pendulous fatty tumour in the perineum. It hung like a pocket-flask between his scrotum and thigh; but he was quite clear that it was in his groin ten years ago, and that it had gradually shifted downwards. It was removed, and no pedicle or other trace of it remained in the groin.

I find, also, a case by Mr. Lyford,* in which a large fatty tumour began to grow in the abdominal wall, midway between the spine of the ilium and the pubes, and thence, as it increased, gradually moved downwards, and was excised from the upper and inner part of the thigh. And thus, in Mr. Lawrence's case, the tumour began to grow in the spermatic cord, and thence had partly extended and partly shifted into the scrotum behind the testicle, where it was extremely difficult to decide its nature.

The fatty tumours usually lie in the subcutaneous tissue, extending in it between the skin and the deeper fascia: but they may extend more deeply. Lately, Mr. Wormald removed one from which distinct lobes or prolongations passed between the fasciæ of the trapezius muscle, and, expanding below them, were constricted by them. In the case of a great fatty tumour† of the neck, removed by Mr. Liston, the operation was made formidable by the lobes of fat extending deeply to the trachea and œsophagus. In rare cases, fatty tumours may be altogether deeply seated. I found one resting on the lesser trochanter of the femur, growing up by the side of the pectineus muscle, but not prominent externally. Vogel mentions the case of a woman who had several fatty tumours, one of which was so closely connected with the nasal bone and the nasal process of the superior maxillary bone, that it was necessary to remove these with it. Mr. Abernethy also refers to a fatty tumour, removed by Mr. Cline, which adhered to the capsule of the hip-joint.‡ In the museum of the Middlesex Hospital is a fatty tumour, one and a half inches long, which was removed from beneath the tongue, where it looked like a ranula; and in the College-Museum§ is one taken from the substance of the tongue.

Such are some of the chief facts respecting the structure of this kind of tumours. Of their life, I need say little.

Their development is, probably, like that of the natural fat.

Their growth is usually slow, and with-

out pain or any affection of the adjacent parts; but they often grow capriciously, having uncertain periods of acceleration and arrest, of which no explanation can be given. The extent of growth cannot well be measured; for fatty tumours have been cut-out that weighed between fifty and sixty pounds, and such as these, after twenty, or even fifty years, were still growing, and might have continued to do so as long as the patient lived. I believe the largest in London is that in the museum of St. Thomas's Hospital, which was removed from a man's abdomen by Sir Astley Cooper, and weighed 37 lbs. 10 oz.* One of the most formidable is that in the College-Museum, removed from a man's neck by Mr. Liston,† where it had been growing for twenty-two years. A parallel to it is drawn in the splendid work of Auvert.‡

What degenerations the fatty tumours may be liable to are not known; their diseases have some points of interest.

They may be partially indurated. The chief mass of a tumour may be found with the characteristic softness, pliancy, and inelasticity of fat; but in its substance one or more lumps, like hard knots, may be imbedded. So far as I have seen, these depend on induration, contraction, and a proportionate increase of the fibro-cellular tissue of the fat; and the change is probably due to slow inflammation of the tumour. It may be sometimes traced to frequent pressure. Thus, a laundress had a fatty tumour, as large as a foetal head, above her ilium, and portions of it were as hard to the touch as cartilage, and appeared to move so freely in the soft fat-tissue about them, that one might have thought them loose bodies, or fluid within cysts. Where these were, the patient had been in the habit of resting her linen-basket.

The indurated parts of a fatty tumour may be the seats of bone-like formations. This is, I believe, very rare; and I have seen only the single specimen in the Museum of St. Bartholomew's Hospital.§ But Auvert describes the same change.||

Cysts, also, may form in fatty tumours. In the case with partial indurations just mentioned, I found, in another part of the tumour, a cyst with thin and partially calcified walls, which contained a glutinous and greenish oily fluid. I presume it is to tumours of this kind that Gluge gives the name of *Lipoma colloides*.

Suppuration and sloughing may occur in

* Medico-Chirurg. Trans., vol. ii., p. 440.

† No. 190.

‡ Observations Med.-Chir. Tab. li. See, for a list of the largest elsewhere recorded, Mr. South's edition of *Chelius's Surgery*, ii. p. 691-2.

§ Ser. 35, 11.

|| Tab. xvi.

* MED. GAZ., iv. 348.

† Mus. Coll. Surg., No. 190.

‡ See also Brodie, l. c.; Simon, Lectures on Pathology; and others.

§ Nov. 1865.

these tumours: but they are on the whole very rare events, except in large pendulous tumours, which have grown too large to be effectively nourished through their bases of attachment. Pathologically these changes have little interest; but in practice they are more important, as being almost the only way in which external fatty tumours are likely to lead to death. Even in these cases, however, they show no imitation of malignant disease.*

Lastly, respecting the causes of these tumours; few things can be more obscure. Nearly all knowledge on this point is negative. The growth may have followed an injury, and we may call this the cause of its formation; but we can give no explanation why such an event as an injury, which usually produces only a transitory impairment of nutrition, or a trivial inflammation, should, in these cases, give rise to the production of a new and constantly growing mass of fat.

FIBRO-CELLULAR TUMOURS.

Under this name I propose to consider the tumours which, in their minute structure, and their general aspect, resemble the fibro-cellular, areolar, or connective tissue of the body. So far as I know, no general account of them is published. The first distinction of them was made, I believe, by Mr. Lawrence,† who described an admirable example in his paper on Tumours; and they are briefly, but accurately, described by Mr. Caesar Hawkins,‡ as a softer and more elastic form of the fibrous tumour. Müller,§ also, refers to them by the name of Cellulo-fibrous tumour; Vogel|| under that of Connective-tissue tumour (*Binde-gewebsgeschwülste*), comparing their tissue with that of the cutis; and Rokitansky¶ points to them as a variety of "gelatinous sarcoma." But these passing references have not obtained for this kind of tumour a general recognition, and in many works it is altogether overlooked.

The fibro-cellular is comparatively a rare

tumour; and this is singular, considering the abundance of the tissue naturally existing, its general diffusion, its easy formation after injuries, in disease, and even in and about other tumours. I can in no wise explain the fact; but it is certain that for ten tumours formed of fat or cartilage (tissues which are rarely produced in other diseases), we do not find more than one formed of fibro-cellular tissue.

As in the last species, so in this, we find instances of both outgrowths and tumours,—i. e., of both continuous and discontinuous overgrowths. The former are, indeed, abundant; for, among them, as being formed chiefly of overgrowing fibro-cellular tissue, we must enumerate, 1st. nearly all the softer kinds of polypi, such as the mucous or gelatinous polypi of the nose, and the polypi of the external auditory meatus;* 2dly, the various cutaneous outgrowths, such as occur in the scrotum, labia, nymphæ, clitoris, and more rarely in other parts; and, as hardly to be defined away from these, the warty and condylomatous growths of skin; and, 3dly, the overgrowths of scars, the cheloid tumours as they are named; for in all these we find overgrowing tissue, resembling, for the most part, the fibro-cellular in a more or less developed state. But of all these I shall not speak, unless for the purpose of comparing them with the discontinuous tumours.

The form in which the fibro-cellular tumours are most frequently seen is that of oval or round masses of soft, elastic, close, and pliant tissue, smooth and uniform, or, when they grow among yielding parts, deeply and variously lobed. Their exterior surface is connected with the adjacent parts by a capsule of fibro-cellular tissue, which generally splits readily. When handled they feel peculiarly tense and elastic; their outer surface may shine like a thin sack full of fluid. On their sections we see opaque white bands, intersecting a shining succulent basis-substance, of serous-yellow or greenish yellow tint. Through this basis the bands course in circles or wavy lines, or form complete partitions, or, in the smaller lobes of the tumour, they run without order, only forming white marks on the yellow ground colour, but giving no appearance of grain, or of regularly fibrous structure.

The peculiar yellow colour of the basis-substance of these tumours, makes them

* On the possible conjunction of fatty tumours and malignant disease, see Sir B. C. Brodie, l. c. p. 282; and the same on the combination of fatty and mammary glandular tumours.

† *Medico-Chirurg. Trans.* vol. xvii. p. 14.

‡ *MEDICAL GAZETTE*, vol. xxi. p. 926.

§ On Cancer, p. 14.

|| *Pathologische Anatomie*.

¶ *L. c. p. i. p. 336*. Müller and others describe under the name of "Collonema" a tumour which I have not seen, unless it be an example of very soft fibro-cellular tumour. Rokitansky (*l. c. p. 335*) describes it as a very soft, tolerably clear, flickering substance, like gelatine, of greyish yellow colour. He briefly describes four specimens observed by himself. Bruch describes as a genuine example of Collonema what I can scarcely doubt was a very soft fibro-cellular tumour. Ueber Carcinoma alveolare, in Henle and Pfeufer's *Zeitschrift*, 1849, B. vii. p. 356.

* All the aural polypi that I have been able to examine were of this texture; but Lebert describes the specimens he has observed as having the fibro-plastic structure mentioned in the next lecture.

look, at first, like fat; it is, due, however, not to fat, but to a serous or synovia-like fluid, which is infiltrated through the substance of the tumour. The mass is just like anasarca cellular tissue; most of all like the subcutaneous cellular tissue of the back, as one sees it dissected in a dropsical body. When such a tumour is cut-through or sliced, the clear yellow fluid oozes from it, or may be abundantly pressed-out; while the filamentous tissue contracting becomes denser and more compact, and more uniformly opaque white, like that of the softer varieties of fibrous tumour. It is to these last-named tumours, indeed, that the fibro-cellular have the nearest relations, and into them that they "pass" through gradational specimens; but there is just the same difference, as well as just the same relation, between these kinds of tumours, as there is between the natural fibro-cellular and fibrous tissues, and there is a similar propriety in distinguishing them.

Examined with the microscope, the fibro-cellular tumours display the filamentous tissue or appearance characteristic of that after which they are named. In many cases, or in many parts, parallel, soft, undulating filaments are found collected in fasciculi, which interlace, and from which single filaments can often be traced out; or, where this is not seen, the texture looks filamentous, through markings or wrinkles of its surface. The best developed and most filamentous tissue is in the intersecting white bands: but similar tissue is present everywhere.

The homology of these tumours, in respect of tissue, is just as perfect as that of the fatty tumours. In chemical analysis they may yield gelatine from the well-formed fibro-cellular tissue; but I believe they yield much more albuminous matter from their imperfectly developed tissue, and from the serous fluid that is soaked in them.

In general, there is nearly complete uniformity through the whole mass of one of these tumours; oftentimes, however, different portions are more or less œdematous (if I may so call them); and, which is more remarkable, portions of cartilage, sometimes partially ossified, may be found in them. I have twice seen this. In the first case, nodules of cartilage were imbedded in a fibro-cellular tumour that grew in the ball of the great toe; and in the second (a similar tumour from the thigh), a portion of its surface, and one of its chief partitions, were formed with cartilage partially ossified.*

The most frequent seats of fibro-cellular tumours appear to be the scrotum, the labium, or the tissues by the side of the vagina, the deep-seated intermuscular spaces in the thigh, and the scalp. They may occur, probably, in many other parts; but either they particularly affect these, or else a singular chance has shown them to me in these situations almost alone.

In the scrotum I have been able to examine two cases, and have found records of four or five more. The first case is represented in a large specimen from the Museum of St. Bartholomew's, and in a drawing made shortly after the parts were removed. The patient was a carpenter, 74 years old; and, when he was under Mr. Stanley's care, the tumour had existed four years. It was a huge mass, about a foot long, and six or seven inches wide, filling the scrotum, and drawing over it all the adjacent integuments. A collection of fluid, like a hydrocele, was at its lower part, a large hernial sac was above it, and the scrotum was thick and œdematous; and the obscurities these threw upon its diagnosis, the doubt how far the hernial sac might extend, the patient's age, and his aversion for any operation for the removal of the tumour, were sufficient to dissuade from active interference.

The patient died about half a year after leaving the hospital. The tumour had attained the weight of twenty-four pounds; the testicle, with a distended tunica vaginalis lay pressed-down below it, and the hernial sac was quite clear of it above. It was easily separable from the surrounding tissues, into which many lobes extended far from the chief mass, and on section appeared partitioned into lobes of various size and shape. It had all the characters which I have described as belonging generally to these tumours, varied only by the unequal collections of blood or of serum, or by its various firmness of texture in its several portions.

A similar case was brought to St. Bartholomew's by Mr. C. R. Thompson, of Westerham, to whom I am indebted for the history. The patient was a parish-clerk, 70 years old, a sickly-looking man, and the tumour had been nine years in progress before his death. It had been first noticed as a hardness just above the testicle; but, as it constantly increased in size, it filled the whole scrotum, displacing the adjacent integuments, and looking at first sight like an enormous hydrocele. Its surface was uneven and lobed, in some parts feeling hard and brawny, in some soft and fluctuating. For many years it was inconvenient only by its size and weight; but, about a month before his death, one of its prominent parts sloughed, and

* Both specimens are in the Museum of St. Bartholomew's Hospital.

hæmorrhage took place from it. After this more extensive sloughing took place, and more considerable hæmorrhage, and the patient sank.

The tumour had the same characters as the last, except in the part that was sloughing, which was denser and more compact, and of dark, blood-stained colour, like congested liver. This might have been thought malignant; but, with the microscope, I found only fibro-cellular tissue infiltrated with inflammatory exudation and blood; in other portions, unmixed fibro-cellular tissue.*

To these cases I might add one related by M. Lesauvages,† in which the tumour, in a man 70 years old, weighed at least 44 lbs., and was of such size that, as the patient sat with it resting on his thighs, it reached to his sternum and beyond his knees. And another of the same kind is related by Dr. O'Ferrall, which he removed successfully; but, excellent as the surgery of this case was, its pathological completeness is marred by the suspicion that a small portion of it was of cancerous structure, and by the finding of a "solitary, hard, circumscribed tuber," in the patient's liver, when, some months after complete recovery from the operation, he died with phthisis.‡

Of the similar tumours growing by the vagina, the best instance that I know is that recorded by Mr. Lawrence.§ A portion of the tumour is in the Museum of St. Bartholomew's Hospital; and, though altered from its first condition, proves the identity of the disease with that of which I have been speaking.

The patient was a lady, 28 years old, and the tumour, suspended from the labium and buttock, as far back as the coccyx, reached near to her knees, was as broad as her two thighs, and measured 32 inches in its greatest circumference. It had been growing four years, and produced no inconvenience except by its weight and bulk.

* The two foregoing cases are published by Mr. Thompson in the *MEDICAL GAZETTE*, May 30, 1851.

† Archives Gén. de Méd. t. ix. p. 212, 1845. M. Lesauvages refers to another very probable case in which Bayle removed the tumour of three or four years' growth, and as large as a head. The patient died, without return of the disease, seven or eight years afterwards.

‡ I am indebted for these particulars, beyond what were published in the *Dublin Journal of Medical and Chemical Science*, vol. i. 1846, to the kindness of Dr. O'Ferrall. Mr. Curling (*On Diseases of the Testis*, p. 51) refers to two cases of small "fibrous" tumours removed from the scrotum, in one of which the tumour was supposed to be a third testicle. These were probably of the kind here described.

§ *Medico-Chirurgical Transactions*, vol. xvii. p. 115.

It was soft and lobed, and the skin was loosely connected with it. Mr. Lawrence removed the greater part of this tumour; but a portion which advanced into the labium, and along the side of the vagina, could not be eradicated: this was therefore cut across; and, when it had grown again, was removed in a second operation two years afterwards. The patient then recovered perfectly, and is, I believe, still living, without any return of the disease, more than twenty years after the operation.

Mr. Lawrence's account of the tumour, and its present appearance, leave no doubt that it was of this fibro-cellular kind.

A similar specimen, weighing more than 10 lbs., was removed by Mr. Liston from a patient 30 years old, in whom it had been growing many years, and a portion of it is in the Museum of the College.* Many of smaller size have been removed from the same part,† and I have recently met with two which have presented the same disease in another phase.

I was asked to see a woman, 34 years old, who had a tumour pendulous from the right wall of the vagina and the right nympha. It was a large flask-shaped mass, about five inches in diameter, attached by a pedicle about one inch and a half in length and thickness, over the upper part of which the orifice of the urethra was arched. All the lower part of the tumour was sloughing, and discharging an offensive ichorous fluid. The upper half was covered with healthy mucous membrane, and felt uniformly tough, pliant, and elastic.

The patient had noticed this disease for three or four years. It had begun as a tumour, projecting into the vagina from beneath its right wall, and had in this situation acquired a large size before it protruded externally. It was punctured, and then grew more rapidly; but the protrusion did not take place till about ten days before I saw the patient. After this protrusion it enlarged very quickly, and, with the sloughing, the general health suffered severely. I removed the tumour six months ago, dissecting it out with little difficulty, and the patient remains well.

It presented a well-marked instance of a very œdematous and sloughing fibro-cellular tumour, and microscopic examination found abundant inflammatory exuda-

* No. 2715.

† Mr. Lawrence, l. c., refers to one by Mr. Earle. Cases are also described by Sir B. C. Brodie, *MED. GAZ.*, vol. i.; Mr. Caesar Hawkins, *MED. GAZ.*, vol. xxi. p. 925; Mr. Curling, *Proceedings of the Pathological Society*, Part ii. p. 381; and (probably) by Dr. O'Ferrall, *Dublin Journal*, 1846, vol. i. p. 520, and vol. iv. p. 337. A specimen from a case by Mr. Keate is in the Museum of St. George's Hospital.

tion mingled with the rudimental fibro-cellular tissue.

Within the last few weeks I have seen a case essentially similar to this; but the tumour was suspended from the labium, and the patient was about sixty years old. And this last fact is perhaps worth notice; inasmuch as, with this exception, all the cases of the fibro-cellular tumour by the vagina that I have met with have occurred in young women, while all the similar tumours in the scrotum have been in old men.

The occurrence of such tumours, as these in the scrotum and labium, may make it necessary that I should particularly say they are not the same disease as are the cutaneous growths that form the pendulous tumours—the elephantiasis, as it is sometimes called—of the same parts. The main differences are:—1st. That these fibro-cellular tumours may be separated or enucleated from the tissues among which they lie; whereas the cutaneous growths have no definite boundary, but are continuous with the proper tissue of the scrotum, or labium, or nympha: in short, the two diseases have the common differences between tumours and outgrowths; the overgrowing is in the one case continuous, in the other discontinuous. 2nd. In the growth of the fibro-cellular tumours, the surrounding parts, including the skin, or the mucous membrane, grow in adaptation to the tumour, but often defectively, or, at the most, only normally; but, in the cutaneous outgrowths, all the tissues take part, and the proper tissue and appended organs of the cutis are as much exaggerated as the fibro-cellular substance of the scrotum or other part. And 3dly. In the tumours, fibro-cellular tissue is the highest form attained, or, at most, a small quantity of elastic tissue is mingled with it; but, in the outgrowths, all the component structures of the skin and subcutaneous tissue are increased.

The two diseases are thus different. Still, the fact is significant, that the parts most liable to the cutaneous outgrowth are also those in or near which the fibro-cellular tumours most frequently occur; and it may be noted that, among those parts in which fatty tumours are most rare, the fibro-cellular are the most common.

For examples of fibro-cellular tumours removed from deep intermuscular spaces, I may refer to two specimens in the Museum of St. Bartholomew's Hospital. One of these was removed ten years ago, by Mr. Stanley, from an elderly man: it lay under the vastus internus muscle, and was easily dislodged from the cavity in which it was imbedded: it was a smooth spheroidal

mass, thinly incapsuled, and the bright yellowish colour of its surface made it to be regarded as a firm-textured fatty tumour; but the microscope found little or no fat in it, and its present aspect leaves no doubt of its nature. The patient died after the operation, and had no similar disease in other parts.

The second of these specimens was lately removed by Mr. Savory, from beneath the tensor vaginae femoris of a man 38 years old. It was of uncertain date, but had been observed about five months: it was firm, elastic, smooth, moveable, and painless. In the operation it was easily removed from its resting-place on the rectus muscle and the inferior spine of the ilium, and the patient recovered perfectly.

This tumour was a smooth oval mass, measuring about 5 inches by 3½. Both in general aspect and in microscopic characters it might have been taken for a type of the species, except for the peculiarity of its being at one end capped with a layer of cartilage and cancellous bone, and having nodules of cartilage set along the course of one of the chief partitions between its lobes.

To these specimens I may add another, in the College-Museum, of which Mr. Hunter has left the record that it was taken from the thigh, and had been supposed to be an aneurism.

These seem to be the most common seats of the fibro-cellular tumours, but here are specimens from other parts. One was removed by Mr. Stanley, from the sole of the foot, where, surely, we might have expected a fatty rather than any other tumour. The patient was a healthy man, 41 years old, and the deeply bilobed and very prominent tumour lay in the subcutaneous tissue over the metatarsal bones, with small lobular prolongations extending among the deeper-seated tissues. It was of eight years growth, and nodules of cartilage were imbedded in the pliant and œdematous fibro-cellular tissue of many of its lobules.

Another of these specimens was removed by Mr. John Lawrence, with the testicle, in the tunica albuginea of which it appears to be entirely enclosed. The patient was a healthy-looking man, 37 years old, and the tumour had in seven years grown to a measurement of nearly six inches by four. When first removed, it was to the eye exactly like a fatty tumour, but it contained no fat, and was a typical specimen of fibro-cellular tumour in a very œdematous or anasarctous state.

A third specimen is a tumour which I removed from the orbit of a man 40 years old, in whom it had been growing for about

eighteen months. It has the general and microscopic characters of the species, but is very soft, and is composed of a cluster of small masses, looking almost like a bunch of small gelatinous polypi of the nose.*

The ten specimens which I have now produced will be sufficient, I think, to justify the giving a distinct name to the kind of tumour of which they are examples. There may be found, indeed, specimens that will connect these with fibrous tumours; but, as I have already said, if we may, among the natural tissues, distinguish the fibro-cellular from the fibrous or tendinous, so may we, so must we, make a corresponding distinction of the tumours that are like them.

I need only add a few words respecting the histories of these tumours. They have been found, I believe, only in or after the adult period of life, and in persons with apparently good general health. Their causes are wholly unknown: their development appears to be, in most cases, like that of many examples of natural fibro-cellular tissue, through nucleated blastema: for though in some I have found abundant cells lengthening and attenuating themselves into fibres, as in the organising of lymph or granulations, yet these may have been formed from exuded lymph.

The growth of these tumours is quick, in comparison with the average rate (so far as we can roughly estimate it) of innocent tumours. They often enlarge very quickly; but this enlargement is probably not growth, but swelling, through increase of the oedematous effusion: (and this difference between growth and swelling may be usefully remembered in the diagnosis of many tumours). The growth is usually painless; but about the vagina is apt to be too rapid for the superjacent tissues. Its possible extent is very great. I have mentioned one tumour of 44 pounds weight, and another of 24 pounds, which was still growing.

Of the degenerations and diseases of these tumours nothing has been yet observed, except the sloughing and suppuration that occurred in one of the cases I have mentioned; and, as to their nature, all that has been said implies that they are completely innocent.

PAINFUL SUBCUTANEOUS TUMOURS form a group peculiar for the pain with which they are connected, and which is so remarkable as to justify giving a description

* Besides these specimens, which are all in the Museum of St. Bartholomew's, I have seen two removed from the scalp, both of which, before removal, were supposed to be cutaneous cysts. A tumour removed by Mr. Humphry (Lectures on Surgery, p. 187) from a finger, and one described by Lebert (Phys. Pathol., t. ii. p. 173) as a fibrous tumour of the neck, were probably of this kind.

of them separate from that of the fibro-cellular and fibrous tumours, with which, considering their other characters, they might be placed.

The painful subcutaneous tumour, or tubercle, has been often well described in relation to its general characters. Its intense painfulness was too striking to escape observation. It was described by A. Petit, Cheselden, Camper, and others; but the first, and to this time the best, general account of the disease, drawn from many instances, was given by Mr. William Wood in 1812.* Dupuytren added many instances to those which he copied from Mr. Wood's paper, and made the disease much more widely known.†

The especial seat of growth of these little tumours is, as their name implies, in the subcutaneous cellular and adipose tissue. They are most frequent in the extremities, especially the lower: very rarely they occur on the trunk, or the face.‡ They are about four times more frequent in women than in men; they rarely, if ever, begin to form before adult life, or after the commencement of old age. It is seldom that local injury, or any other cause, can be assigned for their occurrence.

The tumour usually lies just beneath the skin, scarcely prominent; it has a capsule loosely connected with all the surrounding parts, unless it be to the cutis, to which it may be tightly fixed, and which, in such cases, is generally thin, tense, polished, and like a superficial scar. Sometimes the small blood-vessels of the skin over and around the tumour are enlarged and tortuous, like those near a cutaneous nævus; but, else, all the adjacent parts appear healthy.

Tumours of this kind rarely exceed half an inch in diameter; they are usually spheroidal, oval, or cylindrical; they are firm, nearly hard, tense, and very elastic. Their outer surface is usually smooth, bright, yellowish, or greyish, or pure white; and their sections have the same aspect and consistence, or are varied by an obscure appearance of pure white fibres traversing a greyish basis.§

* Edinburgh Med. and Surg. Journal, viii., 1812. Mr. Wood first gave them the appropriate name they have since borne.

† Leçons Orales, i. 530, ed. 1832. He named them fibro-cellular encysted tumours.

‡ One is mentioned by Mr. Caesar Hawkins, as removed from the face by Sir B. C. Brodie (MEDICAL GAZETTE, vol. xxi. p. 926); and one by Dupuytren.

§ Sometimes the tumour has a central cavity filled with fluid, as in two cases by Mr. Carruthers in Edin. Med. and Surg. Journ., vol. xxxiii.; but it is observable that in one of these, occurring in a man, a visible nerve was connected with the tumour. Perhaps this was a neuroma; for in these the cystic character is not unfrequent.

Among the painful subcutaneous tumours that I have been able to examine microscopically, one was composed of dense fibrous tissue, with filaments laid inseparably close in their fasciculi, and compactly interwoven. These appeared to have been formed in or from a nucleated blastema; for thick-set, oval, and elongated nuclei were displayed when acetic acid was added. Another was composed of well-formed fibro-cellular tissue, with bundles of parallel undulating filaments, matted or closely interwoven. With these were elongated fibro-cells,—the products, perhaps, of inflammation, to which the tumour appeared to have been subject. The substance between the filaments, and that from which they were probably developed, was here, also, a nucleated blastema. A third specimen presented obscure appearances of a filamentous structure, but no separable filaments: it seemed composed wholly of such nucleated blastema as was exposed by the action of acetic acid on the former specimens. In some parts, also, this presented appearances of filaments and nuclei arranged in concentric circles around small cavities.*

From these examples, we may believe that the painful subcutaneous tumour may be formed of either fibro-cellular or fibrous tissue, in either a rudimental or a perfect state. They may also, I believe, be fibro-cartilaginous, as described by Professor Miller,† and by many other writers. But whatever such slight diversity of tissue they may present, the characteristic of all these tumours is their pain,—pain which may precede all notice of the tumour, or may not commence till much later, or may be contemporary with it, but which, when once it has set in, may rise to very agony, such as I suppose is not equalled by any other morbid growth. It is not often constant; but, generally, without evident cause, or with only a slight touch of the tumour, a paroxysm of pain begins, and, gradually increasing, soon reaches a terrible severity. Beginning at or near the tumour, it gradually extends into all the adjacent parts, often flashing, like electric shocks, from one part of the limb to another, or to the whole trunk. Such a paroxysm may continue for a few minutes, or for several hours, and then it gradually subsides, leaving the parts sore and tender. While it lasts, the

tumour, whatever may be its condition at other times, is always exquisitely sensitive; the muscles of the limb may act with irregular spasms, or general convulsions, like those of an epileptic seizure, may ensue. Sometimes, too, the tumour itself swells, the blood-vessels around it become larger and more tortuous, and the skin becomes œdematous or congested, imitating the change which sometimes ensues in a neuralgic part. There are many diversities in the characters and modes of the pain; but this belongs to all the instances of it,—that its intensity is altogether disproportionate to its apparent cause, and that it cannot be explained by anything that can be seen in the structure or relations of the tumour.

This pain suggests interesting questions in relation to the pathology of all tumours; but, before considering it, let me add some facts to complete the history of these. They appear usually to be of very slow growth. I removed one from the leg of an elderly woman, who had noticed a gradual increase of it for ten years; yet, at last, it was less than half an inch in diameter. In other cases they may more quickly attain the same size; but this seems the limit of their size; and, for any number of years, they may remain sources of intense pain, and yet undergo no apparent change of size or structure. They are usually single. I have found only one case in which more than one existed: in this case three lay close together over the great gluteal muscle.* When excised, they are not apt to recur. I removed one from the back of the leg of a lady twenty-eight years old, from whom, two years previously, a similar growth was excised from the same part. After the first operation the pain was scarcely changed; after the second it ceased, and never returned. Sir Astley Cooper† removed two painful tumours, at an interval of a year, from a young lady's leg; but these are the only instances of apparent recurrence that I have found. I believe that they have no tendency to ulcerate, or to assume any of the peculiar characters of malignant disease.‡

In considering, now, the painfulness of these tumours, the first question is their relation to nerves: are nerves involved in them? and do they, as Velpeau§ seems to

* W. Wood, l. c.

† Illustr. of Diseases of the Breast, p. 84.

* Like those drawn from a fibrous tumour of the uterus by Prof. Bennett (On Cancerous and Canceroid Growths, p. 189).

† Principles of Surgery, p. 630. An engraving, from the sketch by Prof. Bennett, makes this the only sure instance of fibro-cartilaginous structure. In the other recorded cases the microscope was not used; and the naked eye cannot discern between fibrous cartilage and dense fibrous tissue.

‡ Dr. Warren (On Tumours, p. 60) speaks of a malignant form of the disease in which the lymphatics are affected, but relates no case of it. The case requiring amputation which he relates appears to have owed its severity to the treatment. Dupuytren (Leçons Orales, i. 542) says they have or may acquire a scirrhus nature, and then end with cancerous softening; but he refers to only one case justifying such expressions, and this case is imperfectly described.

§ Médecine Opératoire, tom. iii. p. 101.

hold, differ from neuromata,—*i. e.*, from the fibrous or fibro-cellular tumours within the sheaths of the nerves,—only in their position? are they only tumours within the superficial or subcutaneous nerves?

The general opinion is against this supposition. Dupuytren says that he dissected several of these tumours with minute care, and never saw even the smallest nervous filaments adhering to their surface. I have sought them with as little success with the microscope. Of course, I may have overlooked nerve-fibres that really existed. It is very hard to prove a negative in such cases; and cases of genuine neuroma, *i. e.* of a fibrous tumour within the sheath of a nerve, do sometimes occur which exactly imitate the cases of painful subcutaneous tumour. Such a case was under Mr. Stanley's care last autumn. An elderly gentleman had for two years observed a small subcutaneous tumour over the lower part of the semi-membranosus muscle. It was easily moveable, and, till within the last three months, had not been inconvenient; but at this time it became the seat and source of pain exactly like that of a painful subcutaneous tumour. It was removed; and I was able to trace, with the microscope, an exceedingly slender nerve, the filaments of which were spread out over one part of the tumour. The tumour was within the neurilemma, and was uniformly firm, elastic, yellowish, and composed of well-formed fibrous tissue.

Many that have been called painful subcutaneous tumours may have been such neuromata as this was. Still, I am disposed to think that most of them are only so connected with nerves, as ordinary innocent tumors are, that receive a few nerve-fibres in their substance. For (1.) the connection of the nerves with even very small neuromata is not so difficult to demonstrate, but that it should have been found, if it had existed, in some of the many painful tumours that have been examined. (2.) The neuromata often occur in large numbers in the same patient; the painful subcutaneous tumour is nearly always single. (3.) The neuromata usually grow constantly, and seem to have no limit of size; even when subcutaneous, they commonly exceed the size of the painful tumours, which generally grow to a certain small size, and in it remain stationary. (4.) Neuromata are most frequent in the male, the painful subcutaneous tumours in the female, sex. An analysis of 26 cases of neuroma taken promiscuously showed that 19 had occurred in men, and 7 in women; while in 28 cases of painful subcutaneous tumours 23 were in women, and 5 in men;—evidence which is almost conclusive for the different natures of the two diseases.

However, even if it could be proved that these painful tumours are within nerves, the question respecting the source of pain would not be fully answered. We cannot ascribe the pain to merely the altered mechanical condition of the nerve-fibres; for tumours that are evidently within nerves are not always, nor even usually, painful. It is remarkable that, in nearly all the cases in which large tumours have existed in the trunks of nerves, there has been little or no pain. The facts collected by Mr. Smith* are clear on this point. Moreover, the subcutaneous tumours themselves often remain long painless, and then become, without any other apparent change, extremely painful; and there are instances of tumours exactly resembling them, except in that pain has never been felt in them. I removed such an one from a lady's forehead. It was about as large as a pea, had been two years growing in the subcutaneous tissue, and had never given pain except once, when it was severely struck. It had all the apparent characters of structure of the painful subcutaneous tumour. I repeat, therefore, that we cannot assign the pain in these cases entirely to an altered mechanical condition of nerve-fibres in or near the tumour. We must admit, though it be a vague expression, that the pain is of the nature of that morbid state of nerve-force which we call *neuralgie*.

Of the exact nature of this neuralgic state, indeed, we know nothing; but of its existence as a morbid state of nerve-force, or nervous action, we are aware in many cases, in which we can as yet trace no organic change, and in many more, in which the sensible organic change of the nerves is inadequate to the explanation of the pain felt through them. In both these sets of cases we assign the pain (speaking vaguely) to a functional rather than to an organic disorder of the nerves,—a disorder commencing in the nerves of the part which is the focus of the pain, but transmitted from them to others which, in the nervous centres, are connected with them.

With this view of the neuralgic nature of the pain in the subcutaneous tumours many of their characters and circumstances agree. The pain is commonly paroxysmal, and sometimes regularly periodical; it is diffuse, or flashing, electric, and most intense; it often excites reflex spasmodic movements, or more severe and general convulsions; it is often aggravated by mental emotions, and the other excitants of neuralgic pains; it is sometimes attended with what is regarded as reflex vascular fulness, but it precedes no organic change.

The consideration of the probably neu-

* Treatise on Neuronia.

neuralgic nature of the pain in and about these tumours is of interest in relation to the pathology of many others. The pains of many other tumours are, probably, in greater or less measure, of the same nature.

The irritable tumour of the breast may be called a neuralgic tumour. Sir Astley Cooper's plates show, indeed, that some which he thus called were like the painful subcutaneous tumours; but the more frequent are, I believe, mammary glandular tumours, imitating in their structure the mammary gland itself. I derive this belief from the general appearance and description of several specimens, and from what I found in a recent case with the microscope. A woman, 45 years old, was under my care with a small tumour lying deep in her breast, which felt hard and not moveable, except with the tissue around it. She had been aware of this tumour for a month, and during all the time it had been the source of intense "darting and dragging" pain, which often extended from it through the chest to the shoulders, and along the neck and arms. The pain was described as so like that commonly assigned to cancer of the breast, that, judging from it, and the age and the other circumstances of the patient, one could not but fear she had cancer. However, the doubt existing made it proper to make an exploratory incision at the commencement of the operation. This was done, and the tumour, having no cancerous aspect, was alone removed. It proved to be a perfect example of mammary glandular tumour, such as I shall more fully describe in a future lecture. Thus the case seemed to be one of mere neuralgia in a glandular tumour of the breast.

Similar instances might be found, I believe, in tumours of other structures; but, without entering further on their history, I would suggest that the account of all these painful tumours makes it probable that the pain the patients feel is, in great measure, neuralgic or subjective; that it has the tumour, indeed, for an exciting cause; but that it owns, besides, some morbid condition inherent or cumulative in the nerves themselves, so that at times they respond, with a morbid exaggeration, to an habitual or slightly increased stimulus. And if this be true of the most painful tumours, it is probably true, in various measures, of many others.

ON THE MODUS OPERANDI OF ARSENIC IN THE EXERCISE OF ITS ANTISEPTIC POWERS. BY DR. GEOGHEGAN.

THAT arsenious acid enters into direct combination with animal proximate principles, there is no reason to doubt; and that such union, *per se*, is adequate to effect this

preservation, is probable from the analogous case of the metallic compounds of albumen; hence, most likely, the complete preservation of the *stomachic contents* for an indefinite period, which I have sometimes noticed (Case VI.). The arsenic deposited by the blood in the organs of the body I have also found (in the case of the liver) to enter into combination with the tissue (see chemical examination of Case III.), and such union has been even viewed by some modern chemists, who assume a summary and exclusive jurisdiction in the domain of physiology, as the cause of its noxious action; an assumption which, independently of other considerations that might be offered, is sufficiently refuted by the fact, that some of the organs that suffer *most* receive the *smallest* amount of the poison, and that the quantity, in any instance, is utterly insufficient to combine with such a portion of the tissue, as consequently to arrest or materially disturb the function of the organ. Reflection on the results at which I have arrived in the examination of the different organs, satisfies me, that the preservative action of arsenic is often to be referred, rather to a catalytic or disposing influence, in virtue of which such changes are produced, either in the molecular condition of the textures, or in the groupings of their chemical atoms, as suffices to impress upon them a new and more stable character. Dr. Christison appears to view this as the probable explanation of the phenomenon, as it regards the body generally, exclusive of the alimentary canal.

I am disposed, however, to give this view a more general application, from the significant fact (noticed, I believe, for the first time, in this paper), that the preservative influence is sometimes visible, where the tissue (*e. g.*, of the stomach or intestine) *has excreted the entire of its arsenic*. (Case I.) It would hence appear that, the disposing influence having been once exerted, the preservation of the tissue is maintained, irrespective of the subsequent retention or expulsion of the poison.

On the other hand, where, from the influence of the poison on the blood during life, or from other obscure causes, a tendency to decomposition is induced, the presence of absorbed arsenic in the tissue will not prevent the latter. Thus in Case II., although all the organs putrefied with great rapidity in cool weather, I detected arsenic in one of them in full quantity. It was absent in other parts not more decomposed. In some instances, the tendency to decay thus induced is less energetic, and attacks only those organs which, from their structure, are ordinarily more obnoxious to decomposition, as the alimentary canal.—*Dublin Quarterly Journal*.

Original Communications.

A CASE OF
SOFTENING (RAMOLLISSEMENT)
OF THE BRAIN,

WITH GENERAL OBSERVATIONS, INCLUDING
A FEW UPON FATTY DEGENERATION
IN ITS RELATION BOTH TO THAT
DISEASE AND APOPLEXY.

BY WM. F. BARLOW, M.R.C.S.,
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Hospital.

It is a happy thing for physicians, and yet happier for mankind, that the most important of diseases are precisely those which interest the most. One is prone to the use of the word "interest," for it aptly denotes that state of mind which is the necessary preliminary to successful inquiry. Interest in the *patient* is not nearly enough, or he would be best of all treated by his familiar friends; there must be added to this an interest in his *case*,—a scientific interest. Now, if there be any diseases especially calculated to arrest attention, they are those of the nervous system, which are, however, full of complexities, and endless shades of them. We cannot, looking to the nature of the subject, dare to anticipate that so bright a light will ever be thrown upon diseases of the brain as Laennec has cast around diseases of the chest, whereof the organs are ingeniously made to utter a most precise and intelligible pathological language. When shall we be able, speaking *generally*, to say of the brain as of the lungs, and as positively, that the affection is in this particular locality, that it is exactly of such a kind, that it involves so much of space, is surrounded by this or that condition of parts, and is surely tending to some specified issue? When to declare of it, as of the lungs, exactly what the scalpel shall after death expose? Many cases have presented sure grounds for diagnosis, many have been met with in which the appearances of the dead have been foretold from the examination of the living; but only let us think of the long line of instances in which the disease has turned out the very opposite of that prognosticated. I should have no faith in the truthfulness of the

physician who laid claim to infallibility in cerebral pathology.

I propose this evening to read to the Society* a case of ramollissement of the brain, with the object of exciting a discussion on that affection. There is yet much to be learnt respecting it, although some distinguished pathologists have studied it so minutely. It is frequently of most hard diagnosis, and difficult treatment; nay, in many instances, it is as impossible to detect as it is to cure it. But I will proceed with my example.

Samuel Rust, æt. 41, a waterman, of somewhat full habit, and subject to attacks of rheumatism, was admitted into the Westminster Hospital, under the care of Dr. Hamilton Roe, Nov. 13th, 1848. He had a dull and heavy expression, and complained of pain in the head, which, though not intermittent, was sometimes much severer than at others. He was very giddy, especially when he walked at all hurriedly. He staggered frequently as though he were intoxicated. He could not move the right hand and fingers freely, and was unable to control or regulate the movements, so that when he attempted to write, the writing was like that of a patient with chorea; occasionally he let things drop from his hand. He saw and heard well. The operations of the mind were impaired. He was easily confused, and was apt to answer questions wrongly. He said he had been in the ward eight weeks, when he had only been in it one month. He lost the train of his thoughts, and was conscious of doing so; he was quite aware, too, when he expressed himself incorrectly, and thought his memory failed him, and truly, for he could not remember the events of yesterday. He would sometimes seem distressed upon being questioned as to his intellect, and burst into tears.

His gums had been "touched" by calomel. He was ordered a blister to the back of the neck, and to be cupped upon the temples to eight ounces.†

* Read before the Medical Society of London, May 17th, 1851. A few small additions have since been made to this fragment.

† I have not said anything further respecting the treatment in this case, because it is not to that matter that I wish now to direct attention. The difficulty of diagnosing ramollissement must throw a doubt upon most cases of affirmed cures of it, at any rate during the lifetime of its subject. Dr. Sims, who availed himself of that wide field of observation, the St. Marylebone Infirmary, considers that there are, after death,

17th.—The complaint has progressed; the left side of the face was paralysed; the use of the right hand was more diminished.

18th.—There was an abrupt change. He lay in a state of stupor, wherefrom he could be roused to passing consciousness. The *right* side was completely paralysed. Reflex actions were readily excited in the arm, but still more in the leg on the foot being tickled with a feather. For the most part he lay as an apoplectic, but now and then noticed things, and would move his *left* arm and leg restlessly, violently, aimlessly. He knew not when his bowels were relieved, or his bladder emptied. *At times* deglutition was difficult; *at times*, too, the breathing was stertorons.

19th.—The condition was much the same. There was the like stupor, and transient recurrences of consciousness. There were moments in which he was himself beyond all expectation. To my surprise, he knew his wife upon her visit, and took her by the hand. This was but the rallying of a moment; directly afterwards he relapsed into the deepest, the most obvious stupor. The symptoms, if I may so say, vacillated. The *vacillation* was one of the most interesting features of the case; unless an observer had watched him *continuously*, and compared his states as they varied, he must have been misled as to his condition; it was strange to see him wake up, not from a sleep, but a positive stupor, which seemed so heavy and overwhelming, that one might have been well excused for thinking that it would have been uninterrupted altogether, and have gradually deepened until the end of life.

20—21st.—He grew worse; the difficulty of swallowing and respiration, noticed formerly as occasional, became more marked and constant, but still there were fluctuations. The state of the volition was singular. Withdrawn from the left side altogether, giving no assistance whatever to the breathing, evidencing no aim, and indicating no

want of any kind, it was often observed to stir the left side with great force and obstinacy. These movements were, I feel quite sure, not spasmodic. They were the evidence of aberrations of a will limited to the utmost, but not extinct. How unlike the motions it once caused!

22d.—He could not be roused so as to know any one; the pupils were slow in responding to light, and there were signs of the circulation beginning to fail. I stayed by his bed-side in order to observe those unadapted movements of the mind which were continued. His wife tried to be recognised in vain; but he kept incessantly fumbling, as men do often when about to die,—with his *left* hand, of course, for the other has been described as paralysed. It was striking to note the differences of the two sides of the body. The *left* arm stirred almost ceaselessly; the *right* never. I pricked the left leg; the impression was felt, and the leg withdrawn. I pricked the other similarly; there was no sign of sensation, but reflex movements ensued at once. I continued to watch him. Even then there came moments wherein he was obscurely conscious. Once, when I passed a spoon between his teeth, he laid hold of my hand, as if to drag it away: but when fluid was placed in his mouth, he made no attempt to convey it backwards; if it were placed for him within the grasp of the pharynx, it was swallowed, but not otherwise. Now and then the act of coughing was produced by it, and it was forcibly ejected. And well did that act serve to show how, in many reflex movements designed *for*, not *by* us, muscles become associated in action, and their motions accomplish an end, as do those which spring from the operation of the mind. *We* do not design the movements of the heart; but where, amongst the illustrations chosen by Paley, do we find stronger evidence of consummate contrivance?

The patient lingered until the 26th, presenting until the last that fluctuation of symptoms which has been fully noted. I could have dwelt upon it further, did I not fear to tire.

On examination, there was found considerable opacity of the arachnoid, the vessels of which were more turgid than usual, and more crowded. But the main thing was a most marked and extensive softening of almost the entire left cere-

appearances which sufficiently attest its cure. That the ramollissement which may be frequently presumed to have been associated with small apoplectic effusions, from the effects whereof the patients have recovered, has been in some way repaired, might be inferred, even from the history of cases, to be highly *probable*. See Dr. Sims on the Cure of Ramollissement of the Brain, Medico-Chirurgical Transactions, vol. xix.

bral lobe. The contrast between this and its fellow was speakingly obvious; the latter was firm, and resisted incision, whilst a great part of the former was absolutely semifluid. Small dots of blood were effused here and there throughout the softened brain. Some spots were of a pink or red hue; a yellowish tinge was seen nowhere. The inner portion of the brain was much more affected than the outer; and the case was in full contrast with one I saw more recently, wherein the softening, which was palpable, was almost confined to the cortical substance, inflammation of the arachnoid having apparently been extended thereto.

This certainly was not one of those cases of imaginary softening which, I fear, are met with every now and then. Where, contrary to what was presented here, the whole of the brain is in the *same* state of consistence, we must, of course, bear in mind that the condition is owing, in every probability, to *post-mortem* changes. An observer has recorded that he once saw *complete* softening of the spinal cord after fatal chorea.* It is a question whether "too much" be not "proved" by so unqualified an expression. *Partial* softening is that which we look to in evidence of processes preceding death. I have not before observed one so extensive as that which was seen in the present case, and certainly never one more marked or better able to explain the symptoms which made their appearance towards the close of life. Fully was the state of the mind accounted for, and the reason of the *right* side being paralysed was seen in the organic affection being seated on the left. This crossed effect, as it has been termed,—or this effect dependent on the crossing of the nerves, as it would be more correct to say,—was, as I need not observe, familiar to Aretæus, and forms at once one of the best of ancient, and the most frequently repeated of modern, observations. No trace of pus was observed any where during the examination of the brain; and this has

been the case, times and often, in instances of this affection which have been marked by a far acuter suffering and speedier course. I have no note of any diseased condition of the cerebral arteries being observed. The state of those vessels is, I need hardly add, a main point to be ascertained, and a diseased one is extremely likely to be noted in those cases of ramollissement which occur at a time when the arcus senilis is unmistakeably clear, or there are other signs of fatty degeneration.

Now, in observing such a condition of the brain as that which was laid open in the case before us, no one would suppose that the appearances explained the steps of its *course*. He would try and revert to the time when all this mischief was as yet just in visible embryo, or to that when the microscope could hardly have detected, or might even have failed to discover, the slightest change. We note morbid ravages at the end of cases when the work is done; but what aberrations of the nutritive, or what disturbances of the circulatory processes, brought them about? What was the condition of parts when first the patient noticed something wrong—wrong in his intellect, or perhaps in his feeling,—a something whereat his acquaintances laughed, probably, because he could not explain it? As time goes on and symptoms declare themselves, the rudest of thinkers can fancy well enough what the changes are, and how affected spots progress or encroach upon each other till they form one only, of more or less magnitude, in the manner clearly described by Rokitansky.*

There are many circumstances connected with our case which invite to comment; some are to be found in the symptoms themselves—the pain; the vertigo; the imperfection of motion; the paralysis; the reflex action; the coma; the difficult breathing and deglutition; the variability of important signs; the state of the mind throughout considered, and so forth. Then there is the absence of a symptom to suggest reflections, and I shall be anticipated in alluding to *no* rigidity of the limbs occurring.

Pain was of great import, there is no question, in attempting the diagnosis of this case of ramollissement. It was

* Dr. Abercrombie, speaking of the caution necessary in admitting facts, alludes to "receiving as facts, on which important conclusions are to be founded, circumstances which are trivial, incidental, or foreign to the subject. For example, in the investigation of affections of the spinal cord, appearances have been often considered as indicative of disease which we have good reason to believe have arisen merely from the position of the body after death." (On the Intellectual Powers, p. 299).

* See Diseases of the Brain, Rokitansky's Pathological Anatomy, vol. iii., edit. of Sydenham Society.

never extremely violent or unbearable, but very obstinate, and sometimes much worse than at others. In itself it had nothing deserving much stress; but from its pertinacity, and its association with a state of mind too evidently weakened, and daily becoming feebler, might be predicted some serious effusion of the brain; and certainly there was none more probable than ramollissement. Still there was no single symptom pathognomonic; and as to all the symptoms combined, there are many who must have seen signs *apparently* similar proved to be dependent on a different disease. Whether or no ramollissement be preceded by much suffering must depend greatly on inflammation preceding it or not, and, if it should precede, on the quickness of its course, the constitution of the patient, the age, complications, and other circumstances. Then it must be considered whether it be pure, or combined with arachnitis. In some cases of the affection there has been the most dreadful pain and delirium; in others a far more modified suffering and an impairment of faculties; but there are cases in which it appears to progress without marked symptoms of any kind. Occasionally, without pain or other warning, persons have died with great quickness: no apoplectic effusion, but a state of marked softening, has been found. In all cases, but especially where morbid appearances are slight, I need hardly say the kidneys should be carefully examined; for, by their failures, diseased brains may be affected even, as healthy, and perhaps to a yet greater degree. I have lately seen several cases of apoplexy in which the kidneys were degenerated; and it must be remembered that, even in instances of large sanguineous effusion, the retained elements of the urinary secretion may *assist* in quickening the fatal result.

Dr. Abercrombie mentions some interesting cases in which arachnitis and softening were combined; and the observer must bear in mind this union when interpreting the evidences of pain. Pain in the head, with its various indications, is a long history: sometimes it is violent, but soon passes away; sometimes it is slight, but, as slight spasm, often portends some incurable malady; sometimes it is neglected until relieved by the deadly stupor of apoplexy. We must note especially the habit of the

patient, and the more so as a mischievous activity of treatment for a supposed affection might lead to a real one. Heberden, in his commentary "*de dolore capitis*," takes occasion to remark—"Atroces enim capitis dolores nonnullos fatigarunt per totam fere vitam, absque eo ut vel mors acceleraretur, vel ingenii vires minuerentur; at ubi dolor conquieverit, ægri omnes res, sicut antea, ministrarunt." Contrast this with what far lighter pains, mere unpleasantnesses, sometimes portend. He only is the true physician who sees things as they are, neither magnifying light, nor wantonly trifling with grave indications. The brain, insentient in health, may, by becoming sensitive in disease, give, waking, as it were, to a new faculty, timely warning of its state; and there may be forms of headache denoting a condition which is to be arrested if opposed in time, though neglect may endanger a process of ramollissement too grave to be cured, or some other form of disorganization not less destructive. There is nothing so difficult to describe as pain, and yet everything may turn on a knowledge of its nature. We must have all seen head affections wherein its first indications were made too lightly of; whilst there are many others in which it has occasioned groundless apprehensions and the opposite treatment to that required.

The *vertigo* or giddiness which was experienced in the case which occupies us, is a symptom deserving comment. It derived its chief value as an indication from its obstinacy, and from its association with other symptoms. Giddiness, though sometimes the sign only of a disordered stomach or passing disturbance, foreruns, at others, epilepsy, apoplexy, or aids in signifying some severe cerebral disorganization. But lately it was prominent amongst the symptoms of a case of an aneurism, of enormous size, at the base of the brain, which produced amaurosis.*

Vertigo is common in old age: "*Se-nectuti quidem est maxime familiaris*," says Heberden; but it must be remembered, also, that it is this age in which it is apt to be of the greatest moment, and should receive unusual care. Vertigo, just as convulsion, pain, and spasm, depends upon exactly reverse conditions

* This case was recently brought before the Pathological Society by Dr. Roe.

of the cerebral circulation. It is common in anæmia and hæmorrhage.—long fasting even may cause it; but it is equally frequent in congestion. Epileptics suffer from it after a paroxysm, and it may occur after ineffectual strangulation. It must be judged of by the symptoms with which it may keep company. Occasionally it may be doubtful whether vertigo be dependent on cerebral congestion or the remedies employed to relieve it. Thus “Wepfer mentions the case of a woman who was recovered after hanging by frequent bleeding: she was for some time afterwards affected with vertigo, which subsided gradually.”*

The way in which *volition* was impaired is especially worthy of remark. Early in this case it seemed more significant than aught beside. That staggering gait, that slowness of movement, that inability to write a word except as a patient with chorea writes it, gave no dark indications of some signal mischief. By watching this damaged function of the will the progress of the case could be accurately measured throughout its course. As it became more influenced, there was an increase of the weakness of the mind; whilst with the absolute hemiplegia came a state of all but perfect annihilation of the cerebral functions, and danger most imminent. It will have been observed that there was in the commencement of the affection a *difficulty* in moving the fingers: this often happens in *partial* paralysis. Here the will is as a player, who, with a new instrument, and strange to the motions he has to execute, effects them awkwardly, and with peculiar slowness. The man in our case needed patience, that he might execute what he could.

Cases of paralysis have often been called complete which were really not so. The patient cannot move by a slight or quick attempt, but he can if he will energetically, continuously, and take his time. Then follows occasionally an extremely slow movement, sometimes resembling that of a tardigrade animal;† and one, perhaps, of which he is but obscurely conscious; nay, of which he may know nothing, unless his eye happen to be fixed upon the part he is ex-

erting himself to move. I have several times noticed subjects of paraplegia, with some anæsthesia, perform slight actions of which they were unconscious. Nothing is more difficult sometimes than to ascertain accurately the real power of the will. Some accounts must be set aside entirely, from the carelessness manifested on this score. Patients are often quite ignorant of the force which is left them; they do not, will not, distinguish between impaired power and absolute powerlessness. When asked to use their limbs, they say they cannot, but they try languidly, perhaps hardly at all. It is a good plan to act upon sensation in these cases; and it was but the other day that I saw a woman, who seemed to have both arms quite paralysed at first sight, literally astonished at her being able to withdraw them from some water of an unpleasantly high temperature in which I had immersed them purposely. The fact was, that her paralysis was incomplete, and not perfect as she thought it; and energetic efforts of volition succeeded where slight ones failed. In the instance of Rust it was necessary to make allowance for the state of his mind, and to let him get confidence and repeat his efforts, in order to be sure of what he really could accomplish.

The reflex actions of the leg were extremely well marked. I could mention many other cases in which I have excited them of late; but their various degrees, forms, and the modes of producing them, would take up too much time for discussion. In looking over the histories of ramollissement, we must confess how much more complete and interesting they would have been had these movements been noticed and detailed; but I need scarcely mention that authors are not to be censured for passing by phenomena which, previous to Dr. Marshall Hall's researches, were either not observed or wrongly interpreted by inquirers into diseases of the nervous system. In some patients who die comatose from acute maladies of the brain, reflex actions of the limbs may be excited until nearly the last moment; and the vigour which they occasionally show, even during the sinking state, contrasts strongly with the increasing enfeeblement of the vital functions. The same may be said of the muscular irritability: the life of the muscles will survive, if I may so say, that of the

* See Mayo's Outlines of Pathology.

† Gilbert White says of a tortoise,—“the motion of its legs is ridiculously slow, little exceeding the hour-hand of a clock.”—Natural History of Selborne, letter I.

body, *taken as a whole*, as Nysten so beautifully showed by galvanism.*

The *variation in the symptoms* towards the close of this case was one of the most remarkable features of it. How is it that, sometimes in these strong head affections, the state of sensation, of volition, of perception, of intellect, will fluctuate so extraordinarily? How is it, again, that the mind will so completely rally just before dissolution? I have seen a child comatose, and seemingly dying, wake up as though it had shaken off death, and recognise its mother, and smile, and seem itself again.† Delusive change! It was but a transient return to a consciousness to be quickly lost in actual dissolution. Dr. Abercrombie and other writers speak of similar facts, and many here present must have seen such. How are they to be explained? Not by dissection, for that shows nothing peculiar. It is probable that the cerebral circulation may become, from some cause or other, so modified in these cases that less compression is exerted on the structure of the brain at the time of consciousness being restored than there had been previously. In the case under review there was a series of fluctuations; but what is seen in some cerebral affections is *one* long, unlooked-for, interval of marked consciousness previous to death; and, though the practitioner may have several times noted this kind of resurrection of the faculties, he is still apt to be surprised when it occurs, and, despite the lessons of former times, to become once more momentarily misled by it. And may we not pardon credulous friends, when, full of hope made sanguine by affection, this phase appears to them to foreshadow recovery—nay, all but to *be* it? A very interesting account of the clearing up of the mind in some cases of head-affection and other maladies before death is given in Sir Henry Hallford's Essay on the *Kavros* of Aretæus. There, also, the deceptive calm which may supervene on the subsidence of wild delirium is felicitously illustrated.

The condition of the intellectual faculties in the case of Rust was a

marked and important feature. He himself perceived their gradual decline, and would remark on his treacherous memory; and, without doubt, the impairment of mind increased *pari passu* with the physical changes. There is but little question that, for a long time, the symptoms of the disease were extremely obscure, and might have consisted in some diminution of intelligence hardly evident to the patient; not at all to his friends. M. Rostan has given a good description of the state of mind which may be remarked in the "first stage" of ramollissement. He speaks of the slow perceptions, the toilsome judgment, the feeble and faithless memory, the loss of imagination, and the confusion of ideas; of replies being just, but uttered with a certain amount of tardiness, after sufficiently evident consideration; and of the embarrassment of speech which may exist. At other times, he continues, the patient expresses himself with brevity; his humour changes: he becomes mournful, taciturn, plaintive, sometimes indifferent. No clearer description could have been given of the general condition of the mind in Rust's instance, had it been drawn on purpose; but such a state, though very common in, is by no means peculiar to ramollissement; and further, this affection is apt to present the most different states of mind imaginable, and these are liable to be associated with most opposite circumstances. It must be inquired whether it be a solitary or combined affection, acute or chronic; the result of inflammation or the contrary; whether it occur in the vigour of youth or the decrepitude of age. Nor let the describer, in speaking of the changes which the faculties may undergo, pass by the less striking and remarkable; for it may happen, though some of the cases present no glaring symptoms to the pathological inquirer, and furnish no room for picturesque narration, that the mind be clouded and impaired. In many cases of cerebral disease it is said that there was no affection of the mind. There might have been no delirium, no mania, no coma; every answer might have been given rightly; no single trace of an obscure perception or passing delusion might have been ever noted; but I doubt not that in many of them there was a real diminution of intellectual vigour, and that the mind was enfeebled, though

* Recherches de Physiologie et de Chemie Pathologique.

† In connection with the subject of variation of symptoms, I would refer to Dr. Marshall Hall's observations on paroxysmal paralysis and mania.

it did not wander. Often have I observed an overwhelming languor of the intellect in such cases, wherein the body shared: the vacant countenance, slow step, and sluggish hand, but too truly depicted the drooping energies of the withering faculties.

But how cursory often is the examination of the physician! What really knows he of the mind's history, which enables him to say, in certain instances, that it is unaffected? Only let us fancy what we have to examine! Can the microscope present aught so delicate to the view as the processes which the intellect of one man may, upon special and searching questioning, expose to the contemplation of another whose turn may come to be in like manner scrutinised as a problem?

The special senses, too, would often teach us more, did we more closely press them. We make one or two loose experiments—perhaps not these even—and are satisfied. And so we get no accurate notions of degrees of impairment, or conclude hastily that *all* impressions will be void necessarily, because *some* are. Does it, then, follow (to choose one sense as an example) that because a faint scent is perceived not, a stronger perfume would also fail? May not the *kind* of odour make a difference? May there not, also, be certain times in which the smell is really more impressible than at others? The pains we should take in an inquiry of this sort, in order that no secret remain hidden from us, may be exemplified by the following interesting passage from one of Southey's letters:—

“Wordsworth has no sense of smell. Once, and once only in his life, the dormant power awakened: it was by a bed of stocks in full bloom, at a house which he inhabited in Dorsetshire, some five-and-twenty years ago, and he says it was like a vision of Paradise to him; but it lasted only a few minutes, and the faculty has continued torpid from that time. The fact is remarkable in itself, and would be worthy of notice even if it did not relate to a man of whom posterity will desire to know all that can be remembered.”*

But in the description of states of the mind—to revert to them again—

* I would have refrained from mentioning this anecdote, but for the fact of Wordsworth having been most indisputably a singularly close and cautious observer.

how very much depends upon the patient! He may trace what happens within him, and so paint it that, when his narrative is transferred to medical pages, it shall be graphic and interesting, so long as it is copied faithfully. But another patient may give no assistance: his natural dulness may be thought a stupidity produced by the disease; and the weakness of his answers, though as bright as they were ever, may be misconstrued into the evidences of a recent imbecility. Nothing can be clearer, than that the records of some nervous affections gain very much both of their point and value from the character of the subjects in which they happen. The philosopher may be seen in the midst of his delirium, and the man of acuteness and judgment may so describe the conditions of sense, will, feeling, and failings or wanderings of the intellect, as to become the guide and help of his physician. And here let me add that, other things being equal, the nobler the mind which is laid prostrate by disease the keener is apt to be our concern. When destruction has swept the forest, it is not the ordinary trees that we deplore so much as those of statelier growth, which, few and far between, had not their like, and branched around and towered aloft in grandeur. Happily, softening of the brain is one of those diseases which, though not peculiar to old age, is oftentimes deferred till then; and, in one of its forms, seems a part only, as it were, of that general decay which gradually, and as though reluctantly, dries up the sources of existence—“*Ita sensim sine sensu ætas senescit, nec subito frangitur, sed diuturnitate extinguitur.*”

The absence of rigidity of the paralysed limbs is a feature of the case just described worth noticing; that contrary state being very common wherein the muscles are more or less contracted or rigid. It is well enough known that M. Lallemand laid formerly far too much stress on this rigidity as a means of diagnosis; but, as he has himself observed, exclusive views are rarely correct, and certainly this symptom is anything but trustworthy as a *proof* of softening; for, though found to accompany it with a frequency which should be allowed its proper weight, it is much too often absent in cases of this affection, and *much too commonly present in other cases*,

to permit of its being considered in that light. I wish that it could be so, for the indications of ramollissement are oftentimes obscure, and we must agree with Dr. Abercrombie that it is not characterised by any uniformity of symptoms. This may be said of the instances in which it affects extreme old age, as well as of others wherein it invades the youthful or mature.

But the rigidity or contraction of muscles in this disease is often a great help in determining its nature, and claims a minute and extended history. It may be transient or permanent, may precede, accompany, or follow the event of paralysis, and it prevails with most varying form and force. In illustration of the last point, I may cite some expressions of M. Lallemand, who uses the phrases of "*légère hémiplegie avec rigidité manifeste*," "*rigidité remarquable dans les muscles fléchisseurs*," "*rigidité très prononcée*," "*roideur dans les membres paralysés surtout lorsqu'on veut les étendre*," "*les membres paralysés ont une certaine roideur*," "*flexion permanente et roideur*," "*roideur tétanique portée au plus haut degré*." None of these phrases need comment, except that in which rigidity of the paralysed limbs is represented to have been augmented by the effort to extend them. From whence the increase of muscular action? Was it through the play of emotion, or the effect of putting the fibres on the stretch? Sometimes spasmodic rigidity is a continuous action springing from direct irritation of the spinal cord, and lasting for a few hours, when it will gradually lessen until the limb relax, and so remain. This happened in a case which I saw lately. A woman of 60, with well-marked arcus senilis, fell down suddenly and became speechless, and palsied on one side. In less than an hour I saw her. There was the most rigid, pertinacious spasm of the arm, which was flexed forcibly. The paralytic leg was much less rigid, and I excited it to well-marked reflex actions by pricking the sole of the foot. Sensation was painfully acute. Occasionally rigidity occurs very slowly; the centric irritation appearing to act much more gradually and moderately. It will commonly happen some while after the attack, producing permanent distortion, and fixing the arm or leg both in wakefulness and sleep. I have known

it succeed to those spasmodic actions of paralysed limbs which were clearly excited by the passions, and at last take the form of that permanent and definite contraction wherein no quivering is ever seen, nor other evidence of irritability. This occurred in an example of atrophy of the brain, which showed all the main features of the affection, and brought to mind the description of Dr. Sims and the delineations of Cruveilhier. But the tonic contraction of paralytic limbs may be, if not altogether induced, mainly aggravated by, emotion; and this I first noticed in a case of hemiplegia (under Dr. Basham's care), produced, as was proved eventually, by a large tubercle of the thalamus opticus.* I have since repeated the observation upon a paralysed woman, the rigidity of whose arm and hand was subject to remarkable variations. In both these cases the effect of *sleep* was marked—of deep sleep, I should say: it lulled the emotions, and relaxed the muscles.

The state of irritability of what are called contracted limbs needs careful testing by gentle galvanism: I doubt not it would be found very various. It cannot be the same, at any rate, in those recent cases of spasm in which the muscular fibres are unimpaired, as in those chronic cases which present lamentably shrunken and attenuated limbs.

The state of volition in reference to the rigidity of paralysed limbs requires special observation. Sometimes the will is absolutely powerless; but I lately noticed, in a case of hemiplegia of long date, a considerable degree of (recovered?) voluntary power over a limb affected with marked contraction.

There is a form of tetanoid rigidity which now and then occurs in ramollissement. Dr. Abercrombie speaks of a young man who, after recovering from an attack of palsy, delirium, and other symptoms of disease of the brain, complained one day of violent and general headache, whereto succeeded loss of speech, hemiplegia, lock-jaw, and tetanoid rigidity of body, which latter were quickly followed by coma and death. "The anterior and lower part of the right hemisphere was extremely diseased, forming a mass in which softened cerebral matter was

* A similar observation, as I have since found, has been made by Professor Romberg.

mixed with pus of intolerable foetor." But the same tetanoid spasm may exist in apoplexy. I saw a remarkable example: it was as though the upper part of the spinal cord had been irritated by a stilette. M. Lallemand would appear to think that spasm will enable us to rightly distinguish between cerebral ramollissement and hæmorrhage. We can only say measuredly that contraction is more frequent in softening than effusion. Why so? It may happen, in many cases of apoplexy, that there is no spasm, on account of the *shock* attending it, or that grave interference with the functions of the cord which pressure of the brain may indirectly produce; whereas softening, as a rule, is more likely to abstract cerebral influence without thus interfering with the spinal marrow. Again, apoplexy is apt to come to an end far more rapidly than ramollissement, and so to give less opportunity for the occurrence of tonic muscular action, which occasionally needs time, in the absence whereof certain associated conditions have no chance of concurring. In instances of paralysis where the patient lives long—paralysis, I mean, from sanguineous effusion—the action in question is witnessed very frequently.

In considering the causes of the tonic spasm of paralytic limbs, we may refer to:—

I. The physical irritation of the spinal cord.

II. The effects of emotion.

III. The augmented irritability of the muscles.

The first is the most common and obvious cause, and that which it is most important to consider. No irritation of the brain itself can *directly* excite motion. Such is the result of M. Flourens' experiments, which have been so clearly applied to pathology by Dr. Marshall Hall. The cord may be irritated *through* effusion of blood in the brain, or the swelling attendant upon its ramollissement, and then muscular action follows, on the principle taught formerly by Haller. Admitting that the swelling just mentioned is capable of producing the contraction, only let us imagine what

varieties of effects, both as to degree and times of occurrence and duration, may be fairly explained by it. No longer need we wonder at the diversities of cases, nor feel surprise that contraction attend not invariably upon softening of the brain. I have already referred to the effects of emotion. How far they extend, and with what frequency they act, I know not; but I am quite sure that the wakeful state of mind which implies some form or other of emotion, active to some extent, is necessary to the manifestation of muscular action in *some* cases of contraction of paralytic limbs, and that it will not seldom be found greatly to heighten it. What share the mere augmentation of muscular irritability may really have in the production of the phenomenon in question, it is impossible to decide, but it is quite clear that it would be most unreasonable not to make due allowance for its influence. Can any thing be plainer, than that centric, as well as peripheral irritation, will, the influence of volition being quite destroyed, act with a power strictly correspondent to the amount or intensity of the motor force, and the degree of irritability of the muscular fibre?

Tonic muscular contraction is sometimes so great that reflex actions are prevented by it; sometimes it is so partial that it becomes obviously heightened by irritation of the skin, or may be superseded by a new form of motion. We must always view the contraction which may be occasioned by cerebral, in connection with that of true spinal, disease. In Dr. Marshall Hall's work on the Diseases and Derangements of the Nervous System, will be found a representation of a portion of the spine.* The canal is laid open, and a conspicuous nodule of bone is seen projecting into it. This during life had irritated the cord, and the result was the most violent and pertinacious contraction of the lower extremities.

[To be continued.]

* See Plate viii. fig. 7; and also Plate vii. fig. 6, for an illustration of the contraction of spinal arachnitis.

ON THE
PATHOLOGICAL SIGNIFICATION
OF SOME OF THE EARLY AUS-
CULTATORY SIGNS OF PUL-
MONARY CONSUMPTION,

CONSIDERED WITH REFERENCE TO THE
PRESENCE OF TUBERCLE.

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[Continued from last vol. p. 1031.]

THE earliest auscultatory signs of
phthisis are, then, in my opinion, de-
pendent, not upon the presence of tu-
bercle in the lung, but upon the irrita-

tion and inflammation which precede
their deposition; and as, in this affec-
tion, all the pulmonary tissues are in-
vaded, it is evident that a great variety
of these signs may be manifest during
the commencing phases of the disease,
according as one or other of these tis-
sues is predominantly affected. Un-
doubtedly, however, these signs are
often of so delicate a nature as to be
inappreciable, except to a highly prac-
tised ear. To such they are sufficiently
well marked to indicate at what stage
the morbid process has arrived, and
what portion of the lung is most affected
by it.

The following table exhibits the
morbid sounds which are met with in
the early stage of phthisis, indepen-
dently of any particular form or phase of
the disease:—

*Synopsis of the Auscultatory Signs of Incipient Phthisis, both previous and subsequent
to the Deposition of Tubercle.*

| | | | | |
|---|---|--------------|----------------------------|---|
| Morbid sounds heard in the lung. | Modifica- tions of the respiratory murmur. | Inspiration. | Rhythm and duration. | { Lengthened; shortened; di- vided (saccadée); irregular. |
| | | | Quality. | { Rough, hard, dry; slightly tu- bular or metallic. |
| | | | Intensity. | { Puerile; or compensatory; fee- ble; absent. |
| | | Expiration. | Rhythm and duration. | { Prolonged; rarely divided. |
| | | | Quality. | { Rough; harsh; often clear and metallic; becomes tu- bular before inspiration. |
| | | | Intensity. | { Generally increased. |
| | Sound superadded or sup- planting the murmurs. | | Dry sounds. | { Sonorous râle; sibilant ditto; dry crackling; pulmonary crumpling. |
| | | | Moist do. | { Fine crepitant râle; sub-cre- pitant do.; humid crackling. |

In every case of incipient phthisis, a
certain number of these signs may be
detected by a physical examination,
combined, however, in a variety of dif-
ferent ways. And, to reduce such com-
binations to anything systematic, it is
necessary to consider what pathological
conditions exist in the lung capable of
producing them. I have before said
that I believe the essence of the disease
to be a process first of irritation or con-

gestion, and then of inflammation and
its consequences; and it is the stage of
this process, and its primary localization
in one or other of the tissues composing
the pulmonary substance, that gives
rise to the differences often observed in
the physical signs of incipient phthisis.

The following, then, I conceive to be
the conditions existing in the lung
during the invasion of the disease, in
its ordinary uncomplicated form:—

- | | | |
|---|----|---|
| 1st. Local excitation, gradually passing into hyperæmia. | a. | Of the bronchial mucous membrane. |
| | b. | Of the air-vesicles and their intervening tissue. |
| | c. | Of both the smaller tubes and vesicles com- bined. |
| 2d. Inflammation, with gradual ob- struction and induration. | a. | Of the mucous membrane of the air-tubes. |
| | b. | Of the tissue of the lung and air-vesicles. |
| | c. | Of the two combined. |

The following conditions may also exist simultaneously :—

a. Irritation of the mucous membrane of the bronchi, with inflammation of the air-vesicles and intervening tissue.

More commonly, *b.* Inflammation of the mucous membrane of the bronchial tubes, with irritation of the air-vesicles and tissue.

c. Inflammation of both the smaller tubes and the parenchyma.

The above morbid conditions may exist, then, in the upper lobe of one or both lungs without the presence of tubercle, and may constitute the first phase of the first stage of phthisis: generally, however, its deposition begins to take place when true inflammation has set in. The auscultatory evidence of the disease may, therefore, be considered in relation to the signs which exist before tubercle is deposited, and the modifications and additions which these undergo when that process has already taken place.

The earliest and most common condition, I believe, which may announce the invasion of phthisis is a local excitation of the lining membrane of the smaller air-tubes: I believe that in many persons of a tubercular diathesis, this irritation, however slight, may be considered as the starting-point of the disease. The evidence of its existence is, of course, delicate, and difficult to be ascertained: signs of its presence are, however, seldom wanting; and these may be explained by the condition and function of the part. The natural stimulus of the lining membrane of the bronchial tubes, is the in-coming air. In its ordinary healthy condition it possesses a certain amount of excitability or power by which it responds to the application of this stimulus; and its mode of doing so, is, I believe, by the tube which it lines contracting upon itself and driving the source of stimulus—namely, the air—still further onward toward the terminal vesicles. This is one of the causes of the respiratory murmur, in whatever part of the chest it be audible, but particularly so in the upper lobes. Now when the mucous membrane is in a state of excitement or incipient congestion, it becomes morbidly susceptible to what would otherwise be its natural stimulus,—in other words, the in-coming air is now too irritating for the irritated and excited membrane; it endeavours, by a propor-

tionably increased effort, to throw it off, and in doing so produces two modifications of the ordinary respiratory murmur. In the first place, the increased irritability and consequent contractility of the tube force the air through it more abruptly and rapidly than it would otherwise do, thus causing a diminution in the duration of the sound to which it gives rise,—viz. the sound of inspiration; and, in the second place, as the natural consequence of a portion of air being forced more rapidly than usual through a given space, there results an increase in the intensity of the same sound. From this may be deduced one indication of this local excitation or irritability of the smaller bronchi—namely, a diminished length of the inspiratory murmur, with slight increase of its intensity, in the affected part, as compared with other portions of the same and of the opposite lung. But another modification of the respiratory murmur is heard in this case—namely, a sound of expiration slightly longer and louder than in other parts, produced, I conceive, in the following manner:—

It has been stated by some of the French pathologists (and I fully believe it) that in ordinary breathing a considerable number of air-vesicles remain closed, or in reserve:—no air, in fact, finds its way into them. If, however, an increased excitability of the smaller tubes should hurry the air through with greater force and rapidity than usual, more air will necessarily enter the part during a given act of inspiration, and this increase of quantity and momentum will then be sufficient to uncloset a number of the hitherto empty vesicles. All this takes place during inspiration: what occurs, however, during the succeeding act is of a different nature. Expiration is essentially passive, and the air already in the lung may be rather said to find its way out than be forced out. During inspiration, besides the vacuum formed in the lung for the ingress of the air, there is a motor power also at work assisting it to find its way into the terminal vessels, notwithstanding their natural tendency to remain closed. In expiration the tissues merely resume their ordinary condition by a passive effort; in coming back to it, they follow the air out of the lung: but if we suppose a larger number of vesicles to have been filled, a proportionable number

will require to be emptied, and the sound accompanying this process will be louder and longer. Such is the view I entertain relative to that increase in the duration and intensity of the expiratory murmur which I have heard in certain isolated portions, or even over the whole of the upper lobe, before I conceive any deposition had taken place there. The modifications of these murmurs, as produced by the actual presence of tubercle, require a different and separate consideration.

If an individual, then, presents himself having an hereditary well-marked strumous diathesis, and complaining of certain general symptoms of a suspicious nature, the following alterations of the murmurs in the upper lobe of either lung may (if permanent) indicate that there exists some bronchial irritation, which, if not arrested, may lead to a morbid condition of a more advanced and intractable type. I shall repeat these signs:—

| Respiration. | | Adventitious sounds. | Percussion. | Voice. |
|---|---|----------------------|-------------|---------|
| Inspiration. | Expiration. | | | |
| Diminished in length, increased in loudness, and rather abrupt. | Slightly increased both in length and loudness. | None. | Normal. | Normal. |

But it may happen that, instead of the smaller air-tubes alone being first affected, the terminal vesicles and their intervening tissue are the seat of irritation, with or without a similar condition of the neighbouring tubes: in other words, that the early stage of scrofulous pneumonia may precede the deposition of tubercle without the accompaniment of scrofulous bronchitis. That this may be the case is as certain as that ordinary pneumonia may (at its origin) exist without any bronchitic complication. In early phthisis, however, I believe this to be more rare. Local excitement of the air-tubes may exist alone, or in combination with a similar condition of the parenchyma; but a primary affection of this latter alone is, I think, of less frequent occurrence,—when present, it nevertheless affords some evidence of its existence.

The first stage of ordinary pneumonia is usually stated to present the following morbid appearances:—The diseased part presents a darker red colour than in health, and crepitates less; if cut, an exudation of frothy bloody serum, more or less abundant, takes place. The vesicles still contain air; some are already obliterated, all are more or less obstructed. This pathological condition was designated by Laennec as the first stage of pneumonia; but these changes already indicate a considerable departure from a healthy state, and that be-

tween a healthy lung and one such as above described there must have been some transition phenomena. This, indeed, is the opinion of that able auscultator, Dr. Stokes, who properly considers the first stage of pneumonia according to Laennec to be in reality the second stage, or that of sanguineous congestion; the actual condition of the affected tissues in the first stage being simply one of local excitation, indicated by a puerile sound of respiration in the part itself. Now I believe that, in some cases of very early phthisis,—when, in fact, the disease appears rather to be hovering over its victim than to have struck it,—a condition of the parenchyma exists, analogous in character (but not in its progress or results) to the primary change which takes place in ordinary pneumonia,—namely, a local excitation of the air-cells and of the minute tubes entering them, and that this may give rise to the same physical sign—an exaggerated respiratory murmur in the affected part. I am fully aware that this kind of breathing is always supposed to denote disease existing in some other portion of lung, and that it merely indicates an increased amount of activity in a healthy part, rendered necessary by the inactivity and loss of power in the diseased one. I do not, however, entirely participate in this opinion with regard to every form of exaggerated respiration, especially when it occurs in the same lung in which more

evident indications of disease exist, and this for the following reasons:—That, in ordinary pneumonia limited to a small portion of lung, there is generally audible, at the edges of the affected portion, an exaggerated respiration,—*i. e.*, in one spot we may have crepitating râle, slight dulness, feeble respiration, and, in close proximity, a loud puerile breath sound. Now I can scarcely imagine it possible for this loud breathing to be the result of an act of compensation in the tissue immediately adjoining; it presupposes that the limits of the disease are distinctly marked out by some boundary, beyond which there exists a perfectly healthy condition of the lung. It, however, happens that this exaggerated respiration is often the prelude to an extension of the disease, its locality becoming usurped by signs which actually indicate such extension.

These two circumstances—first, the improbability of a portion of lung immediately adjoining a diseased one, being so healthy as to be able to perform more than its ordinary amount of function; and secondly, the frequent invasion of this supposed healthy part by the signs of the disease which exist in its immediate vicinity—render it, I think, far more probable that the tissue presenting

the exaggerated breathing is no longer in a normal condition, but rather in a state of local excitation; and that it is to this excitement—whether occurring primarily, or as the result of an extension of disease—that the exaggerated respiration is due. The *modus operandi* of this local excitation in producing exaggerated respiration, not of a respiratory character, is perhaps rather difficult of explanation. To attempt its solution it is necessary to examine in what exaggerated respiration really consists, or how it differs from ordinary respiration: and

1st. The duration and intensity of both murmurs is increased.

2d. The expiration is more affected than inspiration, although the ratio between them is never so much altered as in those cases where the presence of tubercle is the cause of the predominance of the expiratory murmur over the inspiratory.

3d. A slight alteration of quality is generally present in exaggerated respiration.

In comparing, then, the physical signs of local irritation in the smaller tubes with those of a similar condition of the air-vesicles, we find the following difference:—

Of the tubes.

| | |
|--------------|---|
| Inspiration. | { Length rather diminished ; intensity increased. Rhythm rather abrupt. |
| Expiration. | { Length somewhat increased ; intensity do. Rhythm natural. |

No alterations in quality in either murmur.

Of the vesicular tissue.

| | |
|--------------|---|
| Inspiration. | { Length increased ; intensity increased. |
| Expiration. | { Length and intensity both increased, and proportion- ably more so than in inspi- ration. |
| | Rhythm natural in both murmurs. |
| Quality. | { A shade of metallic clearness in both murmurs. |

The condition of the pulmonary tissue giving rise to these modifications of the respiratory murmurs is identical; it is the difference in the locality which causes the difference in the physical signs; both parts are in a state of morbid excitement,—more blood circulates through them, and an exaggeration of function is the result. Now the function of the vesicular structure consists in the accomplishment of a series of chemical changes, produced in the cells by a reciprocal action between the blood and the air, which here come in contact. If the part be in a natural condition of excitability, the ordinary amount of inspired air is sufficient to accomplish the neces-

sary change. If, however, the same part become the seat of increased excitation, with corresponding increase in the flow of blood therein, that amount becomes insufficient, and either a proportional increase or a more rapid renewal of the ordinary supply becomes indispensable. This will readily, I conceive, explain the increase of loudness and length of the resulting respiratory murmur in two ways; for, more air now finding its way into the excited tissue, not only do its cells become more fully dilated, but many of those hitherto closed open to admit the surplus which the already fully distended vesicles are unable to receive, and thus tend to render the

murmur louder and longer than natural: louder by the increase in the amount of the cause producing it; longer by the fact that all the vesicles cannot unfold themselves simultaneously, and that the more fully and numerous they are distended, the greater must be the time taken to perform the process, and the longer the consequent resulting sound,—viz., the murmur of inspiration. Again, in the morbid form of exaggerated respiration, the expiration is likewise longer and louder than usual.

When the act of inspiration has been accomplished in a part circumstanced as above, the air-cells are fully distended—more so, in fact, than natural. The act of expiration now commences, with its accompanying murmur. Now “it is on the reactive power possessed by the pulmonary cells, and the retrograde movement it communicates to the column of air, that the expiratory murmur depends. *Ceteris paribus*, its duration and intensity are exactly in proportion to the strength and slowness of this movement of reaction. The amount of reaction or power with which the vesicles contract is generally proportioned to the extent of dilatation which these same vesicles undergo from the entrance of air during inspiration: hence the greater loudness of the expiration after a long deep breath has been drawn. The intensity of the murmur of inspiration is represented by the number of the vesicles capable of admitting air, and by the amount of distension which they endure from it; while the intensity of the expiratory murmur is represented by the number of cells which react on the air, and by the degree of this reaction. The duration of each depends equally on the degree of expansion and reaction of the cells, and on the slowness or rapidity of their movements.”*

The preceding observations fully explain the increased length and loudness of the expiratory murmur, as heard in exaggerated respiration of a morbid character. In the first place, the vesicles have been more than usually distended, and a larger number have been filled by the act of inspiration. Now, when expiration commences, the fully dilated vesicles, and those hitherto empty, begin to react upon their contents; and it necessarily follows that

the portion of lung in which this takes place presents a louder sound of expiration than one where the majority of the vesicles are but moderately distended, many of them closed, and where, therefore, a less amount of air has to make its exit from the lung. The increased duration of the same murmur is alike explicable upon the same principles; since, if a given number of air-cells take a certain time to be moderately filled, the complete distension of a still greater number will obviously take a proportionately longer period: but, as the reaction of these vesicles corresponds to their amount of distension, it is equally evident that this reaction will also take longer time, and be more complete, the more the cells are distended; and the sound produced by such reaction will be longer in proportion. Hence the modifications of intensity and duration in the expiratory murmur of exaggerated respiration.

In this kind of breathing there is not unfrequently noticed a clearer or drier quality of both murmurs: the sensation of air passing over a moist even surface is less evident than in the natural state. This, in itself, might serve to throw a doubt on the healthy nature of exaggerated respiration; since, by allowing it to be the result of a local excitement, we have a clue to this alteration of quality in the drier condition of the mucous surface which is likely to exist along with this state of increased irritability.

I may here observe, with regard to the above theory of exaggerated respiration as a sign of early functional change in the part where it is produced, that I have, since adopting it, felt more satisfied as to the frequent occurrence of an increased rapidity of the respiratory acts (in many cases without apparent dyspnoea) so often met with in young individuals evidently labouring under a phthisical predisposition, and in whom every item of physical diagnosis was of no avail, save careful comparative auscultation of the subclavicular or supraspinous regions inch by inch when in some circumscribed spot; a murmur of respiration may often be detected both longer and louder than in any other portion of the pulmonary tissue—due, as I believe, to this local excitation of the air-vesicles, as before described.

The two conditions above mentioned

* Fournet, *Recherches Cliniques sur l'Auscultation*, tom. i., p. 365 et seq.

are, indeed, but slight deviations from the healthy state of the lung, but are nevertheless, of importance, and for two reasons:—First, that they constitute a primary link in the chain of a succeeding low inflammatory and destructive process; and, secondly, that, in persons of a highly tubercular diathesis, they are sufficient to determine the deposition of the tubercle itself. This matter, once present in the lung, produces, as is well known, certain modifications in the murmur of respiration. But it is not so much to the presence, but rather to the absence of tubercle, that these remarks have reference; and I shall therefore confine myself to the first of these two consequences—namely, the successive development of the local excitement which has been set up, whether in the bronchial tubes or air-cells, since this may exist for some time before the actual deposition of tubercle, and may yet give rise (prior to this event) to all the general symptoms of pulmonary consumption.

Localised irritation of the smaller tubes is, in its earliest stage, (as before said) marked by certain modifications of the respiratory murmurs in the affected part; no adventitious sounds being as yet audible. But this irritation, if persistent, undergoes a further change; the mucous membrane of the tubes becomes congested, thickened, and drier than natural, the secretion being at first arrested. The effect of this change is necessarily to render the tubes narrower in some parts than in others; and the column of air passing through, being compressed into a smaller space, the pitch of the resulting sound is heightened, and a râle produced—hissing or wheezing in the smaller bronchi, grave or cooing in the larger ones. As these sounds, however, are audible in other diseases of the chest, their mode of production and pathological signification being also well understood, it is needless to dwell upon them in this place, further than to state that their persistence in the upper lobe of a lung, for any length of time, is a most suspicious, but, at the same time, valuable indication, of the insidious disease which may be threatening the unconscious patient. From a habit of examining the chest of almost every young person, whether complaining of distinct pulmonary symptoms or not, I have more than once detected these

signs of irritation, at a time when the patient's general health pointed to far more apparently prominent points of investigation, but which the lapse of time proved to be cases of true phthisis.

It, however, undoubtedly happens that these early stages of pulmonary irritation are frequently overlooked; for the most part, by the patients themselves; and, when they do present themselves for advice, the disease has attained a higher grade of development; the stage of local excitement having passed into one of low subacute inflammation, whether of the tubes or parenchyma. Now the physical signs of this condition are not to be confounded with those which occur when the same parts are the seat of ordinary inflammation. The two processes are essentially different in their course, progress, and results. The latter, though often a destructive process, is nevertheless grafted upon tissues endowed with a proper amount of vitality. Its onset is distinct—its symptoms well marked—its duration comparatively short; and its prognosis, considered as an uncomplicated process, more or less favourable; the tendency of the disease being a return to health, leaving the affected organ but little the worse. The reverse of all this, however, is the case in that form of parenchymatous inflammation which so generally accompanies or precedes the deposition of tubercle. Its onset is insidious and obscure, its symptoms often difficult of appreciation, and its course long and lingering: its products are below the healthy standard of ordinary inflammatory exudations; while its prognosis is most unfavourable; the natural tendency of the disease being one of slow destruction and disintegration of the affected tissues.

[To be continued.]

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 26th June, 1851:—William Phillips Kirkman, Melton, Woodbridge, Suffolk—Robert Toulmin Leeming, Leeds—Frederick Pratt, Swinbridge—Henry William Hubbard, Bury St. Edmunds—William Taylor Colley, New Malton, Yorkshire—Edward Charles Lewis, Richmond, Surrey—Octavius Henry Jennings, Colefield, Gloucestershire—Alfred Horsley Bossy, London.

MEDICAL GAZETTE.

FRIDAY, JULY 4, 1851.

PHARMACEUTICAL legislation is, we think, likely to take the lead of medical legislation: at any rate there is no want of energy on the part of the promoters of the Pharmaceutical Bill. We lately announced that leave had been obtained for its introduction, and that it had been read a first time. We have now before us the printed Bill, and we propose to draw the attention of our readers to some of its more prominent provisions.

It has long been a crying evil that any person, however ignorant or incompetent, might assume the title of *Chemist and Druggist*, and proceed to dispense medicines in utter recklessness of the consequences. There has been, it is true, the law of manslaughter in the background; but we think it will be conceded that it is far better to prevent the loss of life by a proper system of legislation, than to rely upon the common law for the punishment of those who have shown culpable ignorance in a trade in which they have not been regularly educated, and on subjects on which they have not been examined. The Bill before us effectually provides a remedy for this evil. Its provisions are remarkable for their simplicity, conciseness, and, we think we may add, for the fairness with which they deal with all existing rights and privileges.

Under this measure it is proposed to confirm the Charter of Incorporation granted to the Pharmaceutical Society. A Registrar, removable at pleasure, is to be appointed by the Council of this Society. It is intended that this officer shall register the names of all who desire to be entered upon the list of Pharmaceutical Chemists, Chemists and Druggists, or Dispensing Chemists;

and that, for a fee of one shilling, he shall furnish a proper certificate of such registry, this certificate to be sufficient evidence of the facts therein stated up to the date at which it has been issued.

The right to registration is thus defined by the sixth clause:—

“VI. All such persons as shall at the time of the passing of this Act be Members or Associates of the said Pharmaceutical Society of Great Britain, according to the terms of the said Charter of Incorporation, shall be entitled to be registered as Pharmaceutical Chemists, Chemists and Druggists, or Dispensing Chemists, without payment of any fee; and every other person who shall, within *One Year* after the passing of this Act, present, or cause to be presented, to the said Registrar a certificate, and sufficient evidence that such person did at the time of the *passing of this Act* exercise the business or calling of a Pharmaceutical Chemist, Chemist and Druggist, or Dispensing Chemist, in Great Britain, shall be entitled to be registered, without the payment of any fee; and the said Registrar is hereby required to cause the names of all such persons as shall be registered as aforesaid, to be entered in a list or book provided for that purpose, as Pharmaceutical Chemists, Chemists and Druggists, or Dispensing Chemists.”

The seventh clause provides for the registration of apprentices, students, or assistants who may be acting in either of these capacities at the time of the passing of the act.

The Examinations are to be entrusted to the Pharmaceutical Society, and the Examiners to be appointed by the Council of the Society according to the Charter or By-laws. The subjects to which the examination is to be directed are, a knowledge of the Latin language, Botany, Materia Medica, Pharmaceutical and General Chemistry, and Toxicology. A certificate of qualification granted as a result of this examination will entitle the possessor to registration under the act. There is no fee for the certificate, and the amount of the fee for registration is left open to the future decision of the Council.

The eleventh clause gives a power to the Society, within five years after the passing of the act, to remit or alter the provisions respecting an examination, in favour of any person who, at the time it becomes law, shall be serving, or shall have served an apprenticeship to a pharmaceutical chemist, &c. This is intended to meet any case of retrospective injustice which may arise from the operation of the new law.

We now come to the penal portion of the measure. Under the twelfth clause it is proposed to be enacted:—

“XII. That from and after the end of *One Year* from the passing of this Act it shall not be lawful for any person, not being duly registered according to the provisions of this Act, to exercise the business or calling of a Pharmaceutical Chemist, Chemist and Druggist, or Dispensing Chemist, in any part of Great Britain, or to use the name or title of Pharmaceutical Chemist, Chemist and Druggist, or Dispensing Chemist, or any other name, title, sign, token, or emblem, implying that he is registered under this Act, or entitled to carry on or exercise the business or calling of a Pharmaceutical Chemist, Chemist and Druggist, or Dispensing Chemist; and if any person, not being duly registered under this Act, shall, after the end of *One Year* from the passing of this Act, take or use the name or title of Pharmaceutical Chemist, Chemist and Druggist, or Dispensing Chemist, or shall use, display, or exhibit any name, title, sign, token, or emblem, implying that he is a person registered under this Act, or entitled under this Act to carry on or exercise the business or calling of a Pharmaceutical Chemist, Chemist and Druggist, or Dispensing Chemist, every such person shall forfeit and pay for every such offence a sum not exceeding (*Twenty Pounds*) nor less than *Two Pounds*; and such penalty may be recovered by the Registrar to be appointed under this Act, or any Member of the Council of the said Society.”

The County Courts Act may be put in force for the recovery of penalties in England. The proceedings for any offence under the act must be instituted within two months from the date of its

commission, and the penalties, when recovered, are to be paid to the crown. The procuring of a certificate by false or fraudulent means renders the offender liable to a similar penalty.

The clauses of the Act which affect the profession are to the following effect:—

“XVII. Provided always, That nothing in this Act contained shall extend or be construed to extend, to lessen, abridge, or defeat, or in anywise to interfere with any of the rights, authorities, privileges, and immunities heretofore vested in and exercised or enjoyed by either of the Universities of Oxford or Cambridge, the Royal Colleges of Physicians or of Surgeons of England, Scotland, or Ireland, or the Society of Apothecaries of London, or of any person or persons who may now be or hereafter may become entitled to practise as an Apothecary or Apothecaries under an Act of Parliament passed in the Fifty-fifth year of His Majesty King George the Third, intituled “An Act for better regulating the Practise of Apothecaries throughout England and Wales,” or any other legally qualified medical practitioners, but that the said Universities and Royal Colleges, and the said Society of Apothecaries, and all such person or persons as aforesaid, shall have, use, exercise, and enjoy all such rights, authorities, privileges, and immunities as aforesaid, in as full, ample, and beneficial a manner to all intents and purposes as they might have done in case this Act had never been passed.

“XVIII. Provided also, That the several persons who by virtue of the Clause last aforesaid are expressly exempted from the operation of this Act, shall not in the conduct of their several professions or occupations use or assume the name or title of a Pharmaceutical Chemist, Chemist and Druggist, or Dispensing Chemist, or any name, title, or designation implying that they are persons registered under this Act; and if any person shall act contrary to this present provision, such person shall not be entitled to the exemption provided for by the Clause last aforesaid.”

We see nothing objectionable in these provisions: on the contrary, we believe they will meet with the approval of the

majority of the profession. If a surgeon or apothecary wishes to act as a *Chemist* and *Druggist*, and turn a penny by dispensing medicines, let him honestly go through the education of a *Dispensing Chemist*. As an abstract question of equity, a man with a surgical diploma has no more right to make a profit by the dispensing and sale of medicines, than a druggist has to usurp the province of a surgeon, by setting a fracture, or reducing a dislocation. If persons will combine several trades or professions for the sake of adding to their incomes, it is only just to the public that they should be compelled to go through a regular course of education and examination, in order to fit them for this double line of practice.

We trust that there will be no opposition to the passing of this measure. None but ultra free traders, and irregular poachers on the domains of pharmacy and physic, can object to it. We think that it is calculated to work a most important and beneficial reform in the practice of pharmacy.

LETTSONIAN LECTURES,
ON SOME OF THE PATHOLOGICAL
INDICATIONS OF THE URINE,
(*Delivered before the Medical Society of
London,*)

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sistant Physician to, and Lecturer on Materia
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LECTURE I.

*Introduction—Alkaline urine—General pa-
thology—Causes—Treatment.*

MR. PRESIDENT AND GENTLEMEN,—In addressing an assembly of practitioners on a subject which from day to day is acquiring practical importance, and which must owe its progress, in great measure, to microscopic examination, and to the advances of animal chemistry, I feel that I shall be excused in attempting some explanation of what I believe to be the real value of chemistry and the microscope in the diagnosis and treatment of urinary diseases. It is scarcely

a matter of surprise that the value of both these methods of inquiry should have been greatly exaggerated when the benefit derived from their application was first appreciated. It was so with the stethoscope; and the microscope, and animal chemistry, are scarcely yet stripped sufficiently of the exaggerated powers with which early investigators wished to endow them. The evils of this have been many, and perhaps the greatest among them has been that inflicted on patients by a blind adherence to purely chemical views of treatment, obstinately followed in defiance of all foregone experience. The facts ascertained by the chemist have been considered abstractedly from their relation to the general subject, and, fascinated by the beauty of the science, the true pathological bearings of the fact observed have been but too frequently neglected. Let us take as an instance of this a rule of practice which even now influences many of the profession, —viz., that it is right to exhibit acid medicines when the urine is alkaline; than which nothing can be more faulty in its general application.

The fact of alkalinity which we ascertain by chemistry is valuable indeed, and necessary to a correct knowledge of our case, but many considerations are required before we can arrive at the best plan of treatment, and in many cases of the above kind correct pathology indicates precisely the opposite plan to that proposed by the more purely chemical investigators.

Chemistry and the microscope are useful in detecting a certain number of symptoms—symptoms which must be regarded in relation to many others which are afforded us by observation of another kind, and if this be neglected, as much evil as benefit may arise from the application of these important means of investigation.

In the lectures which I shall have the honour of delivering before you, I propose to consider certain conditions of urine, and to regard them in reference to the pathological states which they may indicate, and to show how the characters of the secretion may be such as to afford sources of fallacy requiring some thought and care for their appreciation, and which if overlooked may seriously affect practice. I shall thus proceed to consider the pathological states possibly associated with certain conditions of urine, instead of pursuing the ordinary course of describing a disease, and then noticing the state of the urine accompanying it. In this way, I believe that those whose studies are chiefly prosecuted at the bed-side will be best assisted; and it is my desire to make these lectures as far as possible subservient to the purposes of the practitioner.

In considering the urine in disease, it is not possible properly to appreciate the pathological indications afforded by it, without regarding it in three points of view; and as the distinction I am now about to treat of was neglected by pathological writers previous to the year 1845, when I alluded to it in my work on the treatment of urinary diseases, I shall occupy some few minutes of your time in urging it upon your attention. Urine, as it is ordinarily afforded us for examination, has passed, be it remembered, over a lengthened surface of mucous membrane after its secretion by the kidneys, and, as we obtain it, the variations from its normal character may consist either in an unhealthy action of the chylopoietic organs, of the kidneys themselves, or of the mucous passages over which the urine flows. Unless the physician constantly bears this in mind, it is impossible that he can obtain a clear view of his patient's case,—in so far, at least, as urinary indications are concerned.

In considering the three heads into which I have divided the subject, we may regard diabetes as the type of those variations from the normal standard of the urine in which the chylopoietic organs are in fault. Albuminuria will serve to indicate a variation consequent on disease of the kidneys, while for the abnormal character of urine produced by disease of the urinary mucous surfaces we must look to cystitis, and to certain forms of alkaline and purulent urine, unconnected with lesion of the secreting structure of the kidney. The indications of the urine consequent upon chylopoietic disease, and also those caused by disease of the secreting portion of the kidney, are often simulated by the indications afforded when the mucous surfaces over which the urine flows are alone in fault; the urine being secreted in a healthy state by the kidneys, but being discharged from the urethra greatly altered from its healthy condition. Let us take as an instance of this a form of phosphatic urinary deposit which occasionally appears as indicative of dyspepsia,—the monobasic triple phosphate. An alkaline or neutral urine depositing these crystals may pass from the urethra simply in consequence of the existence of irritation of the mucous surfaces of the kidney, ureters, or bladder, but may have been secreted quite healthy, and of its normal degree of acidity, by the secreting portion of the kidneys. Again, the urine may contain albumen in consequence of disease of the bladder or ureters, causing purulent secretion, while the kidneys may be healthy, and the urine thus vary from its normal character only after it has left the pelvis of the organ. Here, on the one hand, the urinary indica-

tions might be considered indicative of dyspeptic malassimilation, or on the other, of important change in the kidney, whereas the whole mischief might lie in inflammatory disease of the mucous surfaces over which the urine flows after it has left the cortical portion of the organs. It is often, then, highly important, when any abnormal condition is detected in the urine, to ascertain by careful examination, and notice of other symptoms, how far the change from health has been brought about by the influence of the mucous surfaces.

I shall principally occupy the present lecture in considering the subject of alkaline urine, as produced either by the mucous surfaces, by the kidney, or by the chylopoietic organs.

Let us first consider the action exerted upon the urine by the mucous surfaces when it is secreted upon them, what they may add to the secretion, and in what way they may modify its character before it is emitted from the urethra. In health, the additions made to the urine by the mucous surface are epithelium in small proportion, and more or less altered in form, and mucous corpuscles. These are found in all urine, and are easily seen as a cloudy deposit by a bright transmitted light. The mucous corpuscles, which are found in urine, vary but little from those observed in the secretion from the nares, bronchi, &c. With respect to mucus generally, and its uses, I would here remark that it must not be looked upon merely as a covering poured out upon the surface to protect it mechanically when exposed to causes of irritation. This, of course, is one of its uses, but it has also a chemical quality which is valuable, and perhaps too little regarded,—I allude to its alkalinity. The mucous membranes lining the air-passages, nose, and eyes, must constantly be applying this quality to their advantage, more especially in the case of those living in crowded cities, where the fumes existing in the air are almost always of an acid character.

Now, healthy urine is nearly always acid, and this amount of acidity is constantly varying, the secretion becoming at one time neutral, or even alkaline, and at others far above the average degree of acidity. This points to the necessity for a mucous surface capable of pouring out its alkaline secretion freely, and, if necessary, suddenly and in large quantity, and this always happens when irritation is set up, or inflammation produced, in the mucous membrane.

You are all familiar with the secretion which flows from the nose at the commencement of catarrh; and also from the bronchi in some inflammatory conditions. This is

a watery secretion from the mucous membrane, and it possesses a strongly alkaline reaction. The discharge will amount to as much as several pints in the course of the twenty-four hours in some cases of bronchitis. In like manner the mucous membrane of the bladder will throw off under irritation an alkaline fluid more or less clear and watery.

I had occasion some five or six years ago to observe this in the case of a man whose anterior abdominal parietes were deficient. As is usually the case in such persons, the anterior portion of the bladder was also wanting; so that the fundus of that viscus, covered by mucous membrane, was projected forwards where the abdominal walls were deficient. The openings of the ureters were thus presented to view. The mucous membrane was red and inflamed from exposure, and an alkaline fluid was constantly discharging from its surface. To what this alkaline flux amounted during the day, it was, of course, impossible to ascertain; but it was more than sufficient to destroy the acidity of the urine, which was quite alkaline after flowing over the membrane. Thus, if a piece of blue litmus paper was applied to the openings of the ureters so as to test the urine, immediately it flowed from them the paper was reddened, indicating that the urine was secreted of its natural character, and with its full amount of acidity. When, however, the litmus paper was applied about a quarter of an inch below the opening, so as to test the urine after it had passed over that short distance of mucous surface, its characters were quite changed; it no longer reddened the blue litmus paper, but, on the contrary, was sufficiently alkaline to restore the blue colour to those parts of the paper which had been previously reddened by exposure to the urine as it escaped fresh from the ureters. Let us apply this experiment in considering the pathology of alkaline urine, and we must at once admit that disease of the mucous surface is a sufficient cause for the production of this indication.

With respect to alkaline urine generally, it may be stated that whenever it is excreted it is attributable to one of the following conditions:—

1. Disease of the spine from injury or other cause.
2. Dyspepsia.
3. Disease of the urinary mucous membrane.

And 4. The ingestion of medicines, or of aliments containing alkaline salts or salts of vegetable acids.

A fifth—viz., the discharge of an excess of soda, or potassa, or ammonia, from constitutional causes—is mentioned by Dr.

Prout. This, however, I am now satisfied must be regarded as produced by aggravated disease of the mucous surfaces, and therefore should be included under the third heading.

I will proceed to consider these conditions seriatim.

First, then, when disease attacks the spinal column, the cord becoming subsequently affected; or when, from external violence, the nervous centre suffers immediate injury, the urine will become alkaline. Various theories have been resorted to in order to explain this. That the secretion of the kidney may become changed owing to disease in the neighbourhood of those nerves of organic life from which it derives its energy, no one will be prepared to deny; this may possibly happen; but there is much to lead us to suspect that another cause than this has the principal share in bringing about an alkaline condition of the urine. I allude to an increased action of the mucous surface, probably brought about in order to protect the ureters and bladder as much as possible during the passage of acid urine over them. The membrane which in its healthy state could bear the stimulus of the healthy urine has now partly lost its vitality, and an alkaline fluid is secreted for its defence. The view I have here taken is strongly borne out by what we observe in all affections of the spinal column terminating in disease of the medulla spinalis and its membranes. The urine first becomes alkaline; as the disease advances, large quantities of mucus appear; and post-mortem examination of the urinary organs will show an aggravated disease of the mucous membrane lining the pelvis of the kidneys, the ureters, and bladder.

A case of this kind lately came under my care at Guy's Hospital, in which disease had been set up in consequence of a fall. The second and third lumbar vertebræ were severely struck, and caries of these bones supervened. The pain in the loins was very severe, and the urine became alkaline about three months after the injury was received. It eventually contained mucus, and deposited the phosphate of ammonia and magnesia in quantity. Post-mortem examination showed the mucous membrane of the bladder and urinary canals acutely inflamed, while the secreting portion of the kidneys was merely congested, and of somewhat coarser texture than natural. There was advanced caries of the second and third lumbar vertebræ.

I would beg the particular attention of those engaged in surgical practice to the view here taken of the relation of alkaline urine to spinal injury. It would point to the propriety of using alkaline and demul-

cent remedies in such cases for the relief of the urinary symptoms, and the exhibition of alcoholic support with considerable care, and in the least irritating form.

Secondly, with respect to the alkaline condition of urine caused by certain forms of dyspepsia. This, which is accompanied with the deposit of the earthy phosphates, has been regarded by Dr. Prout as indicative of a tendency to the waste of nervous matter, and a general debility of constitution; and it is certainly true that we generally meet with it in those who have been overworked, either mentally or physically. There is a point of view, however, in which this form of urinary disease has not been regarded, but which yet seems to bear strongly on its pathology.

Now the researches of Liebig have shown that the gastric juice in all probability owes its acidity to the same acids as those which enter into the composition of muscular structure—viz., the phosphoric and lactic; and from whatever source these acids may be derived, it is certain that their proportion in the urine is governed by the necessity there may be for their expulsion from, or detention within, the organism for the discharge of the functions of life.

The constitution of the urine is such, that its degree of acidity (taking the whole result of twenty-four hours) may, to a certain extent, be regarded as the measure of the acidity of the stomach, or of the quantity of the phosphoric and lactic acids expelled; and this would seem to point to the deficiency of acidity in the excretion as an indication of disorder of the stomach interfering with the secretion of the gastric juice in its healthy condition. I believe this alone to be the cause of alkaline urine, so far as what are called constitutional causes are concerned; and I do not believe the deposit of phosphates, when it occurs in alkaline urine without disease of the passages, to indicate any thing more than this state of stomach. Under these conditions, the urine is, of course, secreted *alkaline by the kidneys*, and is not, as in disease of the passages, *rendered alkaline after secretion*. This alkaline or neutral state may, if you please, be regarded as indicative of nervous action being defective, and secretion of the gastric juice not going on as it should do in consequence. Whatever view we may take, however, we must regard the disease as more immediately the consequence of a malsecretion on the part of the stomach, probably caused by the circulation of a diseased blood through the structure of the organ.

With regard to the term “phosphatic diathesis,” I do not consider that the deposit of the earthy phosphates is any thing more than an indication that the urine is

neutral or alkaline. The deposit of these earthy salts has led to the erroneous idea that they are present *in excess*, and to the adoption of the above term. There are few diseases, however, in which the earthy phosphates are really present in excess, and these are not allied in any way to the class of cases which come before us as urinary diseases. Thus the urine is often *acid* when large quantities of earthy phosphates are escaping, as in *mollities ossium*.*

I am by no means inclined necessarily to connect alkaline urine with severe nervous irritation, with wasting, and other symptoms of vital decay. Many cases in which we observe the secretion of such urine with phosphatic deposits show no such condition, the debility not exceeding that which characterizes many forms of dyspepsia; while, on the other hand, we often see great depression and loss of vital power, with wasting, as when oxalate of lime appears, and no tendency to alkalinity.

With respect to the treatment of that morbid state of the system which induces the excretion of this kind of alkaline urine, the administration of the mineral acids is by far the most valuable means we possess of restoring the stomach to its healthy function. In many cases this alone will be sufficient, if continued for a few weeks; but in old cases, or where relapse has been frequent, it is highly desirable to have recourse to mild alterative treatment in addition. For this purpose nothing can be better than the use of the bichloride of mercury in small doses, taken at bed-time in the form of draught, and in combination with the tinctures of rhubarb and bark. This will be found greatly to assist the mineral acids in restoring the healthy secretion of the stomach. The bowels should be closely watched in this disease, and their action kept up by warm stimulating purgatives.

I shall now proceed to consider that alkaline condition of urine which is connected with disease of the mucous surfaces lining the kidney and ureters, and in which the urine is secreted acid, but becomes alkaline in consequence of the changes subsequently effected in it. Here, in addition to the alkalinity of urine, we have symptoms not so much characterised by dyspepsia as by irritation of the urinary canals. There are dull pains in the loins, and down the sides of the abdomen, occasional dysuria, and not uncommonly the skin becomes inactive and dry, or subject to occasional excessive excretion. The urine generally contains mucus in excess, and sometimes pus in considerable quantity;

* The above view respecting the deposit of the phosphates was described by me as early as 1845.

and in the older and more aggravated forms of the disease the miseries consequent on calculus in the bladder are often added to other evils.

It has been believed up to the present time that when urine has been secreted acid by the kidney, and has subsequently become alkaline, owing to the action of the mucous surfaces, the cause of the alkalinity consists in the evolution of carbonate of ammonia, produced by the decomposition of urea. The mucus poured out by the mucous membrane has been regarded as a sort of ferment; and by its action carbonate of ammonia has been supposed to be formed by a disturbance in the arrangement of the elements of urea. Now, though it is nearly certain that the urea undergoes this kind of decomposition when the urine is long retained in the bladder or urinary passages, it is highly improbable that such decomposition always takes place in the cases I am speaking of; and I think I shall be able satisfactorily to prove to you that we have no occasion to resort to such mode of explanation. If we take healthy urine of its full acid reaction, and add liquor potassæ to it carefully, we shall find that when we have neutralized its acidity, ammonia is immediately evolved. There is no occasion to use caustic alkali, however; for if we add a solution of basic phosphate of soda instead, which is a very mild form of alkaline solution, we still observe that ammonia is given out in great quantity. If we now test the reaction of this urine, we find that the reddened litmus paper becomes blue, indicating the presence of an alkali; but on drying, it will again assume its red colour, showing that the alkaline reaction was caused by ammonia, and not by fixed alkali; but, it may be asked, how could this happen, since we used *fixed* alkali to produce the alkalinity? The fact is, that our fixed alkali is all neutralised by the acids with which the ammonia was previously combined, and the volatile alkali is set free to exercise its power on the reddened litmus. Thus, supposing the ammonia to have existed as phosphate and hydrochlorate in the urine, the fixed alkali has combined with the phosphoric and hydrochloric acids to form *neutral* salts of the fixed alkali, leaving the ammonia the only free alkali present. So it is that the mucous surface will occasionally act under inflammation: the alkali contained in the mucous secretion is fixed alkali, but its presence produces free ammonia, while the fixed alkali itself is neutralised to form salts with the acids which were previously combined with the ammonia. This state of things will always be observed when the mucous surface is not pouring out any very large quantities of its

alkaline secretion. When, however, there is an excessive discharge of alkaline fluid, then there is a change with regard to the action of reddened litmus, which will now become permanently tintured blue. No drying will restore its red colour, and we therefore at once observe that fixed alkali effected the change. This has happened owing to the excess of fixed alkaline matter poured out by the mucous membrane having more than neutralised the acids of the ammoniacal salts contained in the urine. All the ammonia has been set free, but the fixed alkali has been secreted in such great quantity as to neutralize both the free acid of the urine and the acids of the ammoniacal salts. I would particularly beg your attention to this circumstance, as important distinctions connected with general pathology have been made in reference to these two conditions; whereas I firmly believe there is no necessary difference whatever *in kind* between the two states, and that they are always merely differences in degree of inflammation of the mucous surface. It is a fact, then, that urine may be rendered fugitively alkaline (that is, alkaline by free ammonia), and also permanently alkaline by the action of the inflamed mucous membrane, and that one or the other state may be induced according as the membrane pours out more or less alkaline fluid. Attempts have been made by systematic writers to draw a distinction between these two conditions, founded on the nature of the phosphatic deposits accompanying them. This has greatly confused the subject; but, if you will only regard the matter as I would now wish to place it before you, I think much of the difficulty will be overcome.

The earthy salts of the urine—viz., the phosphates of lime and magnesia—always appear in the form of urinary deposits when the urine becomes alkaline. When the urine deposited the triple phosphate (or phosphate of ammonia and magnesia), Dr. Prout was inclined to consider the case as somewhat different in kind to that in which both the earthy salts appeared—that is, when the phosphate of lime accompanied the triple phosphate. It will be obvious, from what I have told you concerning the fixed alkaline matter contained in the secretion of the mucous membrane, that, if that alkali be poured out only to such degree as to evolve ammonia, and not to neutralise the whole of the acids of the ammoniacal salts of the urine, the triple or ammoniaco-magnesian phosphate must be thrown down as a deposit. If the alkali be effused by the inflamed membrane in still greater quantity, then it is obvious the phosphate of lime must also fall; the

mischiefs in both cases arising from one and the same cause—viz., inflammation of the mucous surface. Now, if we look to Dr. Prout's work, we shall find the history and symptoms detailed under these heads exactly such as we might expect from varying degrees of inflammation of the urinary canals; and it is matter of surprise that the power of that membrane in rendering the urine alkaline, and its necessary influence in producing the various phosphatic deposits, has been so much overlooked as it has been by systematic writers. When, then, you observe urine of alkaline reaction, always ascertain whether or not it affects reddened litmus or turmeric paper permanently. If it do not, and the paper reassume its colour on drying, then ammonia has changed it; and you may conclude, with considerable accuracy, that the mucous membrane is not in so inflamed a state as when a permanent effect is produced. In the one case you will generally have the triple phosphate only as a deposit; in the other, you will have the phosphate of lime also. Of course, it is necessary for you here to exclude from your consideration that form of alkaline urine which I have before noticed, and which is *secreted* alkaline, and is characteristic of dyspepsia. I am now merely speaking of alkaline urine as produced by the action of the mucous surfaces. There is seldom, however, much difficulty in making the distinction between these two kinds of urine. That characteristic of general disorder, and which is *secreted* alkaline by the kidney, is very rarely accompanied with more than the normal amount of mucus; whereas urine which is made alkaline by the action of the mucous membrane nearly always contains mucus and epithelium far beyond the quantity observed in health, and very often pus also.

The disease characterised by the deposition of the mixed phosphates (that is to say, both the triple phosphate and phosphate of lime) is very accurately described by Dr. Prout. He states that it seldom occurs without severe and old disease of the bladder and prostate, which, you will observe, is precisely the condition that would favour the discharge of large quantities of fluid from the mucous surface, and so bring about an alkaline urine, such as would permanently affect the test paper.

I must now direct your attention to that state of urine which has been described by Dr. Prout as consisting in an excessive excretion of the alkalies. This affection, which that great authority was inclined to consider peculiar in character, was observed by him only in very advanced cases

of disease, where the bladder and mucous passages had suffered greatly, or where calculus or what he called long-continued phosphatic diathesis had greatly lowered the patient. From what I have already urged upon your attention, I think you will now be prepared to believe that a very simple explanation may be given of this condition. I have already alluded to two states of the urinary mucous surfaces: in one of them the fixed alkaline fluid was poured out merely in quantity sufficient to liberate a part of the ammonia from the ammoniacal salts; in the second, the fixed alkaline fluid from the mucous membrane overcame the acids entirely, and communicated a permanent alkalinity to the urine when secreted. The first of these conditions was accompanied chiefly by a deposit of the triple phosphate; the second, by both the triple phosphate and the phosphate of lime. Now when long-continued or aggravated disease, such as Dr. Prout has so well described, affects the urinary passages and bladder, and a condition of urine is produced in which ammonia and soda (and, as he states, probably potassa) are found in excess in urine, the cause of the presence of these constituents appears very plainly indicated. I believe, then, that this condition is again produced merely by an inflammation of the urinary mucous surfaces connected with a more excessive discharge of their alkaline secretion; and that it is the constituents of this which, by their presence in such excess, decompose the ammoniacal salts, throw down precipitates of the earthy matters, and, becoming free, produce the form of urine described by Dr. Prout. I in no way believe the disease to be caused by any peculiar state of system.

It will be observed that I have here extended the importance of the alkaline secretion of the urinary mucous surface to a degree which has not yet been accorded to it. I would wish to state, however, that I have only done so after very mature consideration, and a full persuasion of the very satisfactory manner in which this view explains and simplifies the subject.* The discharge from an inflamed mucous

* This point was much neglected by Dr. Prout; but I find that, since I directed attention to it in my work on Analysis and Treatment of Urinary Diseases, published in 1845, it has been mentioned by others. Dr. Bence Jones, in his work, published in 1850, has made a distinction between those cases of alkaline urine caused by disease of the urinary mucous membrane, and those indicative of general disorder. He has also adopted my views with regard to the relation of the early phosphates to alkaline urine, stating it as his belief that the phosphatic diathesis is nothing else than the precipitation of the earthy phosphates, in consequence of the alkalescence of the urine.

surface, when we have the opportunity of exactly estimating it, we all know to amount to a very large quantity per diem. This discharge is a fertile source of alkali; and there can be no possible reason why the urinary mucous membrane should be exempted from liability to excessive secretion any more than the lining membrane of the bronchi or nares. It is, as I have before said, constantly exposed to the action of a fluid which is varying in its degree of acidity, and which is affected by the character of the ingesta; and there is no occasion that I should explain how or why it is that, in our civilised state, those ingesta are most irregularly supplied to the stomach, both in quantity and quality; or how we too often find the members of our enlightened community paying dearly, through their urinary organs, for those physical as well as intellectual delights which are to be obtained at the dinner-tables of the more elegant and refined of the age. There is, perhaps, no mucous surface more harshly dealt with than that lining the kidneys, ureters, and bladder, and none which has been less reasoned upon by pathologists.

You will observe that I have taken especially into consideration the action which the fixed alkali poured out must exercise on the ammoniacal salts of the urine; whereas the production of ammonia in urinary disease has been previously ascribed to the decomposition of urea only. I by no means, however, entirely disregard this last-mentioned source of the alkali: it is well known, indeed, that some portion of urea is always decomposed when brought in contact with fixed alkaline solutions.

The analogy to which I have pointed, in comparing the secretion of the urinary mucous surface under inflammation with the products of other mucous membranes in the same condition, may not at first appear quite satisfactory. It might be very plausibly argued that the condition of membrane under which the greatest amount of secretion was poured out was not necessarily that of highest inflammation; and from what we know with respect to bronchitis, it must be acceded that, when the secretion is produced very alkaline, and very fluid, and in very large quantity, we do not always find that inflammation runs highest. It is under this impression that I would rather apply the word irritation, when speaking of these varying amounts of secretion, believing, as I do, that it more correctly expresses the real and immediate condition. Thus, when the system is broken down by old and long-continued disease, it is then we observe the presence of the fixed alkalies in excess in the urine;

or, in other words, we have then large quantities of the mucous fluid poured out; and it is this kind of excessive discharge which is produced in the bronchial tubes when the patient shows no great power of system, where irritability exists, and where inflammatory action is marked by that degree of atony which the practitioner recognises in the term "subacute inflammation."

With respect to the treatment of these cases of alkaline urine, it must be of a very different kind to that which is applicable to the cure of alkalinity of the urine when caused by stomach derangement. The pathology of the subject must be regarded, and the alkalinity combated by directing treatment to the irritated mucous surfaces. We must remember that the urine is secreted acid, and our object must be to make it less irritating. The acid remedies which are useful, therefore, in that form of alkaline urine dependent on constitutional causes, are here most improper; and we must meet these diseased conditions by the exhibition of alkalies. The urine as it is secreted in the kidney, must be rendered alkaline, and so less irritating; and while we do this, attention must be paid to the state of the secretions generally, and especially to that of the skin,—a much neglected excretory surface, but which should never be forgotten in considerations connected with urinary pathology.

I am well aware that, in the case of the excretion of alkaline urine such as I here describe, high authorities have recommended the use of acid remedies. I entirely differ with this view; I believe it to be inconsistent with sound pathology, and experience has shown me the advantage of the opposite plan of treatment.

With respect to the best means of rendering the urine alkaline and less irritating in this disease, I would recommend the use of salts of vegetable acids: the citrate of soda or potassa, as exhibited in ordinary saline draughts, is an excellent salt for the purpose. This is more especially to be used when it is not desirable to risk purging the patient; when, on the other hand, we find it requisite to produce such effect, the tartrate of potassa may either be substituted, or combined with the citrate.

The vegetable acids are decomposed in the organism, and the base with which they were combined appears in the urine as a carbonate. If the state of the bowels be such as to require purging, there is no better remedy than the ordinary Seidlitz powder of the shops—a combination of soda and potassa with the tartaric acid, which rarely fails to induce an alkaline state of the urine, and thus soothe the irritation of the canal. This treatment, if com-

bired with the use of vegetable tonics, will be found sufficient in early cases. Where, however, we have to deal with cases in which there is evidence of old and long-continued disease, we must not trust to this treatment alone. We may here expect that thickened state of the sub-mucous cellular tissue consequent on inflammatory action; and we must have recourse to mild alteratives and sedatives, and remedies such as will assist the skin to assume a more than ordinary action for the relief of the kidneys: Hydrargyrum cum Cretâ and Dover's powder, in small doses taken at night, may be here used with great advantage. Care must be taken, however, to watch the effects of the mercury,—to ensure, in fact, its alterative action, and to avoid alike both purging and salivation. In the cases Dr. Prout has described as characterized by the presence of the alkalies in excess, mercury is nearly always inadmissible; the patient is generally too far debilitated to admit of its exhibition with any degree of safety, and support, antacids, and sedatives, are all we dare venture upon.

In all these conditions a great amount of relief may be obtained by the use of warm bathing, if it be judiciously applied. In advanced cases the debility is generally too great to admit of it, but wherever the strength allows it, the use of warm or tepid baths, and of friction to the skin, are valuable means of relieving the patient.

An excellent method of rendering the urine less acid and irritating in all these forms of disease consists in the administration of the liquor potassæ. This is, indeed, the old established and favourite remedy which experience has approved; I have constantly used it, and in some cases it is an extremely efficacious and convenient form of alkali. Owing, however, to the small quantity of potassa which we may venture to exhibit in the caustic state, the urine is not rendered alkaline by this remedy so speedily as when the tartrate and citrate of the base are used. I must here state a fact which has been brought to light by this mode of treatment, and which places it beyond doubt that the urine is secreted *acid* in these cases of *alkaline* urine. Now if we begin in the early stage to exhibit small doses of liquor potassæ,—say from 15 to 20 minims, three times a day,—we shall occasionally find that, while this *alkali* is being exhibited, the urine which was alkaline will become *acid*.

You are now prepared to understand how this may happen. If we lessen the acidity of the urine as it is secreted on to the mucous surface, and thereby render it less irritating, that surface will in time recover itself, and no longer pour out that fluid,

which is the result of inflammation. The urine will after a time pass over it without producing irritation, and the result will be that acid urine is voided, its natural acidity being only partially neutralized by the small dose of liquor potassæ. I conceive this to be the only satisfactory explanation of the fact, so anomalous at a first view, that *alkaline* urine may be rendered acid during the administration of an *alkaline* remedy.

I will now say a few words respecting the last heading,—namely, that which refers to the alkaline state of the urine produced by the ingestion of medicines, or of aliments containing salts of vegetable acids.

I need not here stop to consider the effects of the pure or carbonated alkalies when used medicinally; and I have already explained that the medicinal alkaline vegetable salts are decomposed in the organism, so as to afford carbonates of their bases in the urine. I must, however, refer to the effects of some articles of diet which are occasionally capable of rendering the urine alkaline, and which, therefore, may perhaps occasionally produce some anxiety amongst those who are morbidly inquisitive and sensitive as to the state of the secretion.

It will be obvious that, since it is our object to render the urine alkaline and less irritating, as it is secreted by the kidney, in those cases of alkaline urine which are dependent on irritation of the mucous surfaces, those ingesta which produce the alkaline condition must to a certain extent assist us in treatment. This state of things is brought about by the digestion of all sub-acid fruits. It was remarked by Rousseau, who suffered from calculous disease, that he always got relief during the strawberry season, the fruit exercising a favourable influence on his symptoms. This result was brought about by the conversion of the acids into carbonic acid and water; the base with which they were combined passing into the urine in the form of carbonate. But it is not only sub acid fruits which effect this: potatoes taken in quantity will produce a similar result, and thus an excess of that vegetable may become a cause of alkaline urine. I ascertained this fact by experiment, some two or three years ago, on a gigantic Irishman, whose stomach was capable of receiving, if not digesting, seven pounds of potatoes at a meal. Potatoes contain alkaline salts of both the citric and malic acids, and it is to these they owe the property of rendering the urine alkaline. Sub-acid wines, especially champagne, taken in quantity, are also capable of producing alkaline urine. It is important you should be aware of this, as alkalinity may be looked upon as a

sign of rapid decay of vital power in cases of extreme debility or exhaustion after operations, whereas it may be owing merely to the support we are affording the patient in the form of champagne. I have known this to occur, and it produced some anxiety till the real cause of the alkalinity was detected. A glass of champagne every four hours exhibited to a person worn by disease, and whose stomach refuses solid aliment, will generally render the urine alkaline in 24 hours.

Reviews.

1. *Remarks on Spasmodic or Asiatic Cholera, and its True Pathology; with a more Rational and Energetic Plan of Treatment than has yet been suggested.* By M. M'DERMOTT, M.D., T.C.D., Surgeon, 89th Regiment. Pamphlet, 8vo. pp. 28. Dublin: Hodges and Smith. 1851.
2. *A Non-medical Essay on Spasmodic Cholera.* By PHILO-MEDICUS. Pamphlet. 12mo. pp. 46. London: Houlston. 1851.
3. *On the Mode of Origin and Progress of the Epidemic Cholera in Huddersfield and the Neighbourhood in the Autumn of 1849.* By JOHN TAYLOR, M.D. Lond., formerly Professor of Clinical Medicine in University College, London, and Physician to University College Hospital. Pamphlet, small 8vo, pp. 38. London: Tyler. 1851.

1. DR. M'DERMOTT'S pamphlet first describes the progress of cholera at Birr, where his regiment was stationed, and confirms the opinion held by many other observers, as to the contagiousness of the disease. The author in the next place offers some general remarks upon the disease and its symptoms. We here quote the author's pathological views:—

"The true pathology, then, of cholera appears to me to be, that the first effect of the primary cause of this mysterious disease is to break or destroy the cohesive or vital power that preserves the component parts of the blood in a homogeneous state; and the consequence is, that the serum is detached or separated from the blood, of which it formed a most essential component part, and is poured upon the mucous membrane of the alimentary canal, where, generally speaking, its mechanical bulk

excites the bowels to action, and is usually expelled downwards."

This pathology the author considers sufficient to explain, "pretty satisfactorily," many of the prominent symptoms of cholera. The treatment founded upon it, regarding the disease in the nature of a hæmorrhage, is the administration of opium and lead.

How far these "remarks" of Dr. M'Dermott's can pretend to novelty, we leave our readers to judge.

2. Philo-medicus is surely ironical in the *nomme de guerre* that he has taken to himself; for he introduces himself to his readers by a fierce denunciation of the obstructions offered by *p ysicians* at various times to the progress of knowledge, forgetting that physicians are not the only class who have opposed improvement under the impression of checking error. Of the *animus* of the writer, the following passage may serve as an indication:—

"It will still be found that the physician is as much the slave of that feeling, emphatically characterised as that of 'the shop,' as the veriest huckster in the metropolis."

Therefore Philo-medicus, being free from bias, will cut the Gordian knot. But he seems to be aware that he has taken upon himself a task which he is not fitted to complete; since we find him confessing that the determination whether cholera be a new or an old disease—

"would demand an extent of research and discrimination that he cannot pretend to bring to it, and that no non-medical person should presume to do, however interested in so rational and so scientific an investigation."

The author, however, cannot see that this reasoning applies *à fortiori* still more pointedly to inquiries into the pathology and treatment of the disease. Thus the non-medical inquirer, after discussing the different and opposite opinions that have been offered upon the cause of the disease, and enumerating the conflicting methods of treatment, coolly proposes to decide in favour of that view "which in its rationale has common sense for its basis; or, still better, that which has experience in its favour, and successful practice for its proof." Notwithstanding

the strong powers of discrimination, and the abundant common-sense with which Philo-medicus may be endowed, we do still hold that medical men are the best qualified to decide upon the points here mentioned. If they have failed to come to an unanimous opinion upon these subjects, we despair even of the talents of Philo-medicus. Nothing, however, is easier than for a *lay* looker-on to arrive at conclusions, and to form hasty generalisations. The author may be reminded that the distinguishing feature of the mind of a correct observer lies in the power it has of perceiving differences, rather than of detecting resemblances: dwelling exclusively on the latter is sure to mislead; as may be seen in the case of Philo-medicus.

The following remarks have amused us by reason of their *modesty* :—

“As, however, it has been candidly acknowledged by the Faculty, ‘that all hitherto advanced as to the proximate cause of cholera is mere conjecture,’ and ‘that we are in a state of entire ignorance on the subject,’ it may be permitted to one not a practitioner to offer his opinion relative to it.”

Philo-medicus pronounces thus authoritatively upon this vexed question :—

“The proximate cause, then, I consider to be the insufficient or non-oxidation of the blood itself, occasioned by the breathing a sub-oxygenated atmosphere, or by inhaling some subtle poison with which it is loaded.”

The effect of this is to suspend the action of the lungs, brain, heart, &c. The treatment suggested by the author however, offers nothing particular of novelty or originality. Calomel, opium, &c., are allowed; but fresh air and cold water are the grand means by which our lay friend will convey oxygen into the system, to repair all the damages of the respiration of a sub-oxygenated atmosphere.

We had expected, on opening this pamphlet, that at least we should have learnt something from one who had bestowed so much time and trouble to make himself acquainted with all the information to be obtained relative to the nature and treatment of cholera: we felt that some suggestion worthy of his pretensions should have been made to help us out of our difficulty, by Philo-

medicus; but we can only say of the pamphlet before us—

“Desinit in piscem, mulier formosa superne.”

3. Dr. John Taylor's account of the origin and progress of cholera in Huddersfield is reprinted from the pages of the Medical Times. The author gives a detailed list of all the cases that occurred in Huddersfield, and then offers his inference, as thence drawn, that the epidemic neither arose from nor was propagated by contagion, but was attributable to certain local causes which he describes.

Practical Observations on the Teeth: designed for Popular Use. By HENRY JORDAN, Dentist. Small 8vo pp. 104. London: Highley, 1851.

THIS work simply professes to put before the non-medical reader an abstract of what has been written and done by others than the author himself. “It is not intended for the benefit of the profession,” the author tells us, but “to prove useful to the public, as a guide to the adoption of such means as may enable them to preserve their teeth from disease.” If it succeed in so doing, why Mr. Jordan's “occupation is gone.” Mr. Jordan endeavours to excuse this popularising the subject of dental science, on the plea that “the scientific practitioner has nothing to gain by making a secret of the principles of his own art, and can well afford to leave all mystery in connection with it, to those who live by empiricism.” Such reasoning is, however, merely specious, and will not mislead us, or diminish our conviction that semi-popular, semi-medical works are imperfect, unsatisfactory, and unsafe. It is but an imposition upon the understanding of even the best educated non-medical persons, to tell them that no “mystery” is required in the practice of our art. The subjects to be discussed cannot be spoken of without the employment of scientific and technical expressions, the full and right meaning of which can only be apprehended by persons who have received a medical education. Besides, if the public can be supposed capable of understanding a book on dental surgery, how is it that even the profession itself has concurred in the wisdom of the prosecution of this branch of surgery as a distinct division of labour? It is because it involves

such appropriate principles, study, and practice, that perfection can only be attained by undivided attention.

We disapprove of such appeals to the judgment of the public on professional matters.

CHARTER OF THE ROYAL COLLEGE OF SURGEONS — ACCEPTANCE OF THE RESOLUTIONS OF THE COLLEGE BY THE MANCHESTER SURGEONS.

A MEETING of members of the Royal College of Surgeons was held yesterday afternoon, at the Town Hall, "to take into consideration the present state of the charter of the college, previous to the introduction into parliament of a bill for the regulation of the medical profession." The gentlemen present were Dr. Sinclair, Messrs. W. W. Beever, D. Noble, G. Southam, John Hatton, G. Bowring, Henry Winterbottom, J. M'Keand, Trafford Whitehead, John Walsh, R. H. M'Keand, G. V. Birks, W. Briggs, W. E. Manley, of Tyldesley; Fawsitt, of Oldham; Leah, of Gee Cross; and Bellet, of Stockport, &c. &c. Mr. Beever was called to the chair, and resolutions to the following effect were unanimously agreed to:—That the resolutions of the Royal College of Surgeons, passed on the 19th and 24th of March last, are of so just and conciliatory a character that they should be accepted, so far as surgeons are concerned, as the basis upon which a final settlement of the medical reform question should rest. That, as the resolutions in question concede the proposals submitted to the Right Hon. Sir George Grey, Bart. in May, 1850, by a deputation of provincial physicians and surgeons, with the exception of the points relating to the payment of a fee, and the standing of members on admission to the fellowship, this meeting deems it right that a decision upon these two questions shall rest with Her Majesty's government. That this meeting reiterates the condemnation of any measure of medical reform, that provides for the establishment of what has been designated a college of general practitioners, &c. That a memorial, embodying the substance of the above resolutions, and signed by the chairman on behalf of this meeting, be forwarded to Sir George Grey, Bart., with a request that he will proceed with the subject of medical legislation during the present session of parliament, and that the following be adopted as the memorial to be signed by the chairman:—

*To the Right Hon. Sir George Grey, Bart.,
Her Majesty's Principal Secretary of
State for the Home Department.*

SIR,—The undersigned, as chairman of a

public meeting, held in the Town Hall, Manchester, of members of the Royal College of Surgeons of England, begs respectfully, on behalf of the same, to call your attention to the following circumstances. Certain resolutions, adopted by the council of the College in March last, are deemed by the members residing in Manchester and the immediate neighbourhood, to be of a character so just and conciliatory that they may be accepted, so far as surgeons are concerned, as the basis upon which a final settlement of the vexed question of medical reform should rest. You will have noticed that, with the exception of two points, the resolutions in question concede the several demands submitted to you by a deputation of provincial physicians and surgeons, in May 1850. These points, involving the payment of a fee on admission to the fellowship, and the standing rendering members eligible to it, the surgeons of this locality respectfully submit should be determined by yourself on behalf of Her Majesty's Government. And tendering to you, sir, our grateful acknowledgments for the anxious consideration which you have given to this subject, we have once more to urge that, in any measure of medical legislation which you may introduce, all provision be excluded for a separate incorporation of general practitioners so called. Believing that the differences upon the subject of medical reform that have hitherto obstructed the several attempts at legislation may now be satisfactorily accommodated, the undersigned, on behalf of those whom he represents, most respectfully prays you to introduce a bill for the better regulation of the medical profession during the present session of Parliament.

Signed, on behalf, &c., of the meeting,

W. W. BEEVER, Chairman.

Manchester, July 1, 1851.

The proceedings concluded with a vote of thanks to the Mayor for his kindness in granting the use of a room for the purposes of the meeting, and to Mr. Beever for the able manner in which he had presided.

GENTLEMEN ADMITTED MEMBERS OF THE ROYAL COLLEGE OF PHYSICIANS.

At the quarterly meeting of the Comitia Majora, held on Wednesday, June 25th, the following gentlemen, having undergone the necessary examinations for diploma, were admitted Members of the College:—Dr. Sweeting, Abbotsbury, Dorset; Dr. Hooper, Grove Hill, Camberwell. Also, Dr. Sluden Davis, Fillingley, Coventry; Dr. Jones, late of St. Leonard's-on-Sea; Dr. Wilson, Whitby, Yorkshire,—were admitted Extra Licentiates.

Proceedings of Societies.

PATHOLOGICAL SOCIETY OF LONDON.

DR. LATHAM, PRESIDENT.

May 20, 1851.

DR. BALY exhibited a specimen of

Absence of the Pericardial Sac, the Heart lying in the Cavity of the Left Pleura.

The subject of this malformation was a man, æt. 32, measuring about 5 feet 6 inches in height, and of rather feeble frame: he died, the 17th of May, 1851, in Milbank Prison, where he had been confined since the 16th December, 1850. Previous to his committal to Knutsford Gaol, in November 1850, he had followed the calling of a gardener. For nearly three months after his reception at Milbank he remained under the ordinary discipline of the prison, working as a tailor, and taking exercise for an hour daily. When admitted to the Infirmary of the prison, on the 7th March, he complained of cough and diarrhœa, had lost flesh, and was found to be the subject of pulmonary consumption. On the 26th March symptoms of tubercular peritonitis supervened, and his emaciation became more rapid: he died in a state of extreme exhaustion.

While under observation at Milbank Prison, he presented no appearance indicative of obstructed or disordered circulation, and suffered from no more dyspnœa than usually attends tubercular disease of the lungs. His pulse was always regular, and its number, except during the last few days of his life, not more than 92; and, on the occasion when his chest was examined, soon after his admission to the Infirmary, nothing abnormal was detected in the action and sounds of the heart.

After death there was found extensive tubercular disease of both lungs, and general cohesion of all the abnormal viscera by firm false membranes containing innumerable tubercles. The right lung, also, was universally adherent to the reflected pleura. The left lung was adherent at its summit, but in the rest of its extent was free; and, when the sternum and cartilages of the ribs were raised, it was at once noticed that the heart, having no separate sac to enclose it, was in close contact with this lung, and had at the same time no abnormal connection with the diaphragm: the heart and left lung lay, in fact, in one serous sac, the membrane forming which

was reflected upon the surface of either organ, constituting in the one case the pulmonary pleura, in the other the visceral pericardium. This serous membrane, traced in the horizontal direction, after lining the sternum and the ribs on the left side, covering the posterior and outer surfaces of the lung, and then its inner surface, was reflected at the root of the lung directly upon the left pulmonary veins, and thus reached the base of the heart. After investing this organ, and the vessels arising from and around it, to the normal extent, it passed forward to the sternum, being here separated from a corresponding layer of the right pleura only by a thick layer of fibrous and cellular tissue. The part of the diaphragm on which the heart and the left lung rested, being covered with the same serous membrane, formed the base of the large sac in which they lay.

Beneath and behind the heart the serous membrane, where it passed from the base of the heart to the diaphragm, formed a crescentic fold. This fold, thickened by fibrous tissues between its layers, arose on the right side of the ascending aorta, passed downwards to the right of the right auricle, and in front of the inferior vena cava, and, crossing behind the left auricle, terminated on the left pulmonary veins. The depth of this crescentic fold was greatest posteriorly, but did not there exceed three quarters of an inch, except close to the vena cava, where the finger could be passed into a pouch behind it to the depth of an inch and a half. Below and to the right of this crescentic fold of membrane, which, there can be little doubt, was a rudiment of the pericardial sac, fungi-like processes of brownish and loose fat, like that which commonly occupies the anterior mediastinum, projected into the cavity of the serous sac.

Another peculiarity was, that the left phrenic nerve, entering the thorax in the normal situation, instead of passing down between the heart and left lung, crossed in front of the arch of the aorta to reach the septum, between the two pleural sacs on the right of the heart, when it passed downwards, and, reaching the diaphragm, took a direction towards the left side.

A third fact noticed was, that a thin and fragile false membrane, evidently the product of recent inflammation, covered the inner surface of the left lung, and that a similar false membrane invested to some extent the corresponding left side of the heart; a slight adhesion, of small extent, and easily ruptured, also existing between the apex of the heart and the contiguous surface of the lung.

The visceral pericardium, or the serous covering of the heart itself, was generally

smooth, thin, and free from white spots. The heart was of normal size, and its valves were healthy.

Cases of congenital absence of the pericardial sac are confessedly very rare. Only two seem to have been recorded as having occurred in this country: one by Dr. Baillie (in the Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge, vol. i. p. 91); the other by Mr. T. B. Curling (in the 22d vol of the Med.-Chir. Trans., p. 222). An exact account of a third case has been given by Breschet (Répert. Gén. d'Anatomie, tom. i. p. 212); and references to a few others, less minutely described, and some of them not well characterised, will be found in Otto's Pathological Anatomy (trans. by South, p. 254).

In Breschet's case, and in Mr. Curling's, rudiments of a pericardial sac similar to those observed in the present instance existed behind the heart. In Dr. Baillie's case this appears to have been absent. In all three of these cases the left phrenic nerve took the abnormal course towards the right side of the heart, before descending to the diaphragm. And it may not be uninteresting likewise to notice, with reference to one suggested purpose of the pericardium—namely, the protection of the heart from inflammation which might otherwise extend to it from the lung or pleura—that while, in the present case, there were traces of recent inflammation of the serous membranes covering the contiguous surfaces of the heart and lung, in Mr. Curling's case there was a slight adhesion between the apex of the heart and the left lung, with partial thickening of the serous covering of both; and in Breschet's case were two slender adhesions between the heart and the diaphragm (see Mr. Curling's observations on this point, loc. citat. p. 229).

It remains only to state that, although the fibrous structure of the pericardial sac was to so great an extent absent, yet a thick fibrous stratum strengthened the serous membrane behind, and to the right side of the base of the heart, and descended to form with the tendinous portion of the diaphragm the same close connection which naturally exists between the fibrous pericardium and the central tendon of that muscle.

Dr. O. WARD exhibited a

Microscopic Preparation of an Ossified Tendon,

of which the cancelli, instead of being smooth cavities, were crusted over with osseous particles, like the interior of certain agates. These crystalline particles were also seen in some fragments of bony

concretions in the lungs taken from a specimen formerly brought under the notice of the Society. There was no appearance of Haversian canals, but there were numerous animalcula, though not so abundant nor as regularly disposed as in healthy bone.

Also

A Placenta,

very small, more than half of which was unfitted for its functions by deposits of masses of lymph in its substance; and along a part of its edge on the foetal surface it was studded with semitransparent minute projections closely resembling the deposits upon the peritoneum in scrofulous inflammation of that membrane. The cord was very thin, 13 inches long. The foetus, which weighed only 2 lbs. and 1 oz., was expelled alive between the 6th and 7th month, but only lived 18 hours. The mother had suffered severely during her pregnancy from vomiting, and the placenta adhered more firmly than normal. Under the microscope, the capillaries of the condensed part of the placenta seemed filled with, and united together by, an opaque darkish substance, some of which, when dried on a slip of glass, turned quite white, as though it were ossific matter in a soft state. A few oily globules were observed in the fluid, which flowed from the recent moist specimens of the diseased portions.

Also two specimens of

Lymph and Bony Deposits in the Placenta, from different cases; shown in proof of the great frequency of these appearances, and the little influence they usually have upon the foetus, except where they affect a considerable portion of the placenta. But it was remarked that they occurred more frequently in the subjects of lying-in charities than in women in better circumstances, though the cases hitherto observed were too few to warrant a conclusion upon this point.

This was the last meeting of the Pathological Society for the season.

Dr. LATHAM, as President, stated he had to mention to the members of the Society that Dr. Peacock had resigned his office as secretary, and that Dr. Quain had been elected by the Council to succeed him. The President then proposed a vote of thanks to Dr. Peacock, in terms highly complimentary to him, for the zeal and ability with which he had conducted the duties of his office.

Dr. WILLIAMS, in terms equally complimentary, seconded the motion, and it was unanimously carried.

ACADEMY OF MEDICINE, PARIS.

June 17, 1851.

On the Use of Twisted Bougies in Stricture of the Urethra.

M. LEROY D'ETIOLES addressed a letter in which he submitted a series of facts to show the advantages of the employment of bougies twisted spirally, in overcoming certain irregular strictures of the urethra that have resisted the ordinary instruments. The cases cited were fifty-three in number, and had all been witnessed by medical men. M. Leroy-D'Etiolles stated that it is not requisite that the instruments should be made specially for the purpose: it is only necessary to twist a small common gutta percha bougie twice or thrice round a large pin or wire, and letting it remain for a few minutes, when the spiral twist will have become permanent. The bougie thus formed follows the sinuosities of the stricture, but requires some skill and patience in its use.

Congenital Syphilis.

A report was read on a memoir presented in April last by M. Depaul.* The report repeated the proposition of the author already given, expressed a high opinion of the value of the essay, and proposed its publication. A long discussion took place upon the report.

Correspondence.

MR. SYME'S OPERATION FOR STRICTURE.

SIR,—I have only to-day happened to see your journal of May 16th, which contains some statements that certainly should not have remained so long unnoticed if they had been known to me sooner.

You say, "a fierce paper war has arisen between the two Edinburgh Professors—Syme and Lizars," but must, or at least ought to know, that I have not addressed a single word upon the subject in question to the so-called "Professor."

Within the last eight months I have performed this operation nine times in the Royal Infirmary of Edinburgh, in presence of the largest class of surgical clinical students in Her Majesty's dominions. These gentlemen can testify that in no instance has there been bleeding, extravasation of urine, or any other unpleasant consequence, and that all the patients speedily and completely obtained the relief which they de-

sired. As you say that "something more than the guarantee of Mr. Syme's reputation is wanting to assure the surgeon that he would be justified in having recourse to the proposed operation," I beg to inquire if you think the evidence thus afforded sufficient, and, if not, what further proof you deem requisite to establish the safety and efficiency of my operation.

I am, sir,

Your obedient servant,

JAMES SYME.

Edinburgh, June 26, 1851.

* * * Certain parts of this letter, which would fall under the English law of libel, have been omitted. We give Mr. Syme the benefit of stating publicly that a paper war has not been carried on between the two Professors, although we have had quite enough of controversial writing on this subject in the journals and independent publications. We have no doubt that the evidence referred to by Mr. Syme will be sufficient to justify those who approve of the operation for stricture by incision, to adopt Mr. Syme's practice.

MR. SYME'S OPERATION FOR STRICTURE.

SIR,—I am a country practitioner, and study with great interest, and considerable deference, any new views or new practice proposed or advocated by the members of the profession whose fortune it is to enjoy the incalculable advantages attending the practice in a metropolitan hospital. I pride myself in having been a pupil of Mr. Syme, and entertain the greatest respect for his ability and sound judgment. With intense interest I have read every thing connected with Mr. Syme's plan of treating obstinate stricture by what Mr. Miller calls the perineal section. Mr. Syme's cases have all succeeded, and they number about fifty. Moreover, Mr. Syme does not hesitate to claim, with perfect confidence, for his operation, "that it is always practicable, perfectly safe, and adequate to afford permanent relief." What was my surprise and consternation to read in Mr. Acton's able work that he had witnessed the operation several times performed in the most able manner, and "*that all the patients have died.*"

Don't you think, sir, that to enable us in the country to form a somewhat reasonable conclusion regarding a practice attended either with such superlative good or such appalling mortality, that Mr. Acton should state the particulars of each of *all* these cases, or, at least, how many the *all* are, and what the immediate cause of the deaths? It is my humble opinion that this is a duty imperative upon Mr. Acton,

* See p. 869 of our last volume.

—a duty which is due by him to society, to the profession, and to Mr. Syme.

I am, sir,
Your obedient servant,

A SUBSCRIBER.

Cheshire, June 18, 1851.

ON A NEW METHOD OF APPLYING CAUSTIC IN THE TREATMENT OF STRICTURE.

SIR,—Stricture is so important and difficult a disease, that any contributions likely to increase our mastery over it can hardly fail, I think, to interest some of your many readers.

What I am now about to do is not to revive any of those vexed and contested questions about dividing, burning, breaking down, or wearing away the stricture, but to introduce a simple, and, I believe, new way of applying the caustic.

The general plan is to direct a small hole to be made with a pin in the extremity of the bougie, and into this is inserted the piece of caustic destined to be applied to the stricture; or else we have armed bougies.

The objections to these are, in addition to those which have made so many surgeons abandon them for the plan of fixing the caustic themselves, that in many cases, especially in the country, armed bougies cannot always be had recourse to, as they are not always to be had when they are wanted, and that they are more expensive.

The plan of cutting a piece of caustic is not free from objections: it is somewhat tedious, and the caustic sometimes projects and comes loose. Not that I believe there is anything to be apprehended from this, unless it be very large, but it alarms both the surgeon and patient, and, in some irritable strictures, produces a very unnecessary amount of spasm and suffering.

The plan I now propose is somewhat similar to Dr. Hunter's (?) way of applying caustic to pustules in the eye. The place where the caustic should go, being cut flat on the bougie with a knife, and then made a little rough, a piece of caustic is laid on a sixpence, and fused in the flame of a candle; the rough spot on the bougie is dipped in the fluid, and is instantly coated smoothly with caustic. It is then dipped in the tallow, and twirled gently round till this sets, so that it has a smooth button-shaped sheath of fat. All that is now necessary is to clear the way to the stricture with a large bougie, and then to pass down that which has just been armed. The advantages of this plan are—

1. That we can fix the caustic to any part of any bougie.

2. That we can regulate the quantity with the greatest exactness.

3. That there is no waste; for what is left on the silver cools and hardens, and can be used another time.

4. That the surface is smooth, and does not irritate the urethra.

5. That these bougies are simple, cheap, always attainable, and efficient, and that (the caustic being protected by the fat from the action of the air and moisture) they may be prepared beforehand during leisure moments.

My wish to be brief induces me to avoid giving cases, although notes were kept of some for this very paper.

With your kind permission, I shall at no very distant date call attention, through the medium of your journal, to the advantages of aiding the absorption of strictures by blistering and friction.

I have the honour to remain, &c.

JOHN L. MILTON.

40, Jewin Street, City.

THE SYDENHAM SOCIETY AND ITS PUBLICATIONS.

SIR,—I think I shall be backed by a vast majority of the members of the Sydenham Society, when I deprecate, with all my energy, the substitution of "Hunter's Gravid Uterus" for two ordinary volumes expected for the year. Everybody respects the memory of Dr. Hunter, and everybody hath come out of a gravid uterus. But, without entering into any argument on the subject, I take leave to affirm that this is not the sort of publication which is meant for the Sydenham Society by its projectors, or which is coveted by its members. The work may be a jewel in its proper place; but the Sydenham Society should not be its casket.

I am, sir,

Your humble servant,

ROBERT HULL, M.D.

June 1851.

PARALYSIS AFFECTING THE TEETH.

IN a former paper I remarked that although the teeth are possessed of an exquisite sense of touch, and are frequently the seat of intense pain, yet no one (as far as I could ascertain) had observed in paralysis a loss of sensation in the teeth. I have been for years on the watch for this symptom, and have at length detected it in a gentleman who has had several attacks of hemiplegia, each accompanied by complete numbness of all the teeth at one side of his mouth.—*Dr. Graves, in Dublin Quarterly Journal.*

BOOKS & PERIODICALS RECEIVED FOR REVIEW

DURING THE LAST TWO WEEKS.

- Giornale Oftalmologico Egiziano. Maggio e Giugno, No. 2 e 3.
- Digitaline. Rapports de MM. Rayer, Soubeiran et Bouillaud.
- Traité de Médecine Légale et de Toxicologie. Bibliothèque du Médecin-Praticien. Tome 15ème.
- Comptes Rendus. Nos. 22 et 23, Juin 2 et 9. — Tables des Comptes Rendus, tome 31.
- Journal de Chimie Médicale. Juin 1851.
- Reform der Orthopädie in 60 Thesen durchgeführt. Von Dr. Werner.
- Journal für Kinderkrankheiten. Band 14. Erlangen, Jan. u. Feb.
- Die Ohrenheilkunde in den Jahren 1849 und 1850. Ein wissenschaftliches Zeitbild. Von Dr. W. Kramer, Berlin.
- Gout: its History, Causes, and Cure. By William Gardner, M.D.
- Diseases of the Lungs and Heart. By W. H. Walshe, M.D.
- A Compendium of Materia Medica and Pharmacy. By J. Hunter Lane, M.D.
- Handbook of Natural Philosophy and Astronomy. By Dion. Lardner, D.C.L. &c. 1st Course: with 400 illustrations.
- Lectures on the German Mineral Waters. By S. Sutro, M.D. &c.
- The Laws of Health in relation to Mind and Body. By L. J. Beale, M.R.C.S.
- Miss Martineau and her Master. By J. Stevenson Bushnan, M.D.
- The First Step in Chemistry. By Robert Galloway, F.C.S.
- The Wisdom and Beneficence of the Almighty as displayed in the Sense of Vision. By T. W. Jones, F.R.S.
- Braithwaite's Retrospect of Medicine. Vol. 23, Jan.—June 1851.
- Ranking's Half-Yearly Abstract of the Medical Sciences. Jan.—June 1851.
- An Address to the Suffolk District Medical Society, Boston, U.S. By Samuel Parkman, M.D.
- Boston Medical and Surgical Journal. May 1851.
- British American Medical and Physical Journal. June 1851.
- The Upper Canada Journal. No. 1, Vol. 1, April 1851.
- British and Foreign Medico-Chirurgical Review. July 1851.
- Edinburgh Monthly Journal of Medical Science. July 1851.
- The Journal of Psychological Medicine. July 1851.
- The London Journal of Medicine. July 1851.
- Pharmaceutical Journal. July 1851.

BIRTHS & DEATHS IN THE METROPOLIS During the Week ending Saturday, June 28.

| BIRTHS. | | DEATHS. | |
|-----------|-----|-----------|-----|
| Males.... | 716 | Males.... | 519 |
| Females.. | 723 | Females.. | 513 |
| 1439 | | 1032 | |

CAUSES OF DEATH.

| | |
|--|------|
| ALL CAUSES | 1032 |
| SPECIFIED CAUSES | 1031 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 218 |
| <i>Sporadic Diseases, viz.—</i> | |
| 1. Dropsy, Cancer, &c. | 50 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 127 |
| 4. Heart and Bloodvessels..... | 30 |
| 5. Lungs and organs of Respiration | 124 |
| 6. Stomach, Liver, &c. | 54 |
| 7. Diseases of the Kidneys, &c. | 13 |
| 8. Childbirth, Diseases of Uterus, &c. | 8 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 12 |
| 10. Skin..... | 1 |
| 11. Premature Birth | 0 |
| 12. Old Age | 39 |
| 13. Sudden Deaths..... | 29 |
| 14. Violence, Privation, Cold, &c.... | 85 |

The following is a selection of the numbers of Deaths from the most important special causes:

| | | | |
|--------------------|----|------------------|-----|
| Small-pox..... | 24 | Convulsions..... | 48 |
| Measles..... | 41 | Bronchitis | 45 |
| Scarlatina | 14 | Pneumonia | 56 |
| Hooping-cough | 46 | Phthisis | 145 |
| Diarrhoea..... | 19 | Lungs | 7 |
| Cholera..... | 1 | Teething | 5 |
| Typus..... | 38 | Stomach | 2 |
| Dropsy | 15 | Liver..... | 10 |
| Hydrocephalus | 24 | Childbirth | 4 |
| Apoplexy | 19 | Uterus | 3 |
| Paralysis | 16 | | |

REMARKS.—The total number of deaths was 109 *above* the average mortality of the 26th week of ten previous years.

METEOROLOGICAL SUMMARY.

| | |
|--|---------------------|
| Mean Height of the Barometer | 30.03 |
| Self-registering do. ^b | Max. 102° Min. 35.5 |
| ^a From 12 observations daily. ^b Sun. | |

RAIN, in inches, 0.6. — Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 4° *above* the mean of the month.

NOTICES TO CORRESPONDENTS.

Alla Redazione del GIORNALE EGIZIANO.—Il primo numero ha mancato. I due seguenti sono arrivati.

Dr. Fearnside's communication has reached us. The remarks on Cretinism in London, by Dr. G. A. Rees, shall appear on an early occasion.

We are obliged to our old and valued correspondent, Dr. Macgregor, of Glasgow, for his Cases in Clinical Medicine. They shall appear with as little delay as possible.

Mr. Tomes's paper will be published, if possible, next week.

Dr. N. Bethune. — Our exchanges are already very numerous, and we cannot at present add to the number.

Salt and Son.—The notices can be admitted only as advertisements.

Mr. Thomas Taylor.—To Dr. J. O. McWilliam, Trinity Square, Tower Hill; or Dr. Babington, 19, George Street, Hanover Square.

Owing to the length of the two lectures published in the present number, we are again compelled to postpone the King's College Hospital Report and various articles.

Lectures.

LETTSOMIAN LECTURES,
ON SOME OF THE PATHOLOGICAL
INDICATIONS OF THE URINE,
(Delivered before the Medical Society of
London,)

BY G. OWEN REES, M.D., F.R.S.

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LECTURE II.

*Hæmaturia—idiopathic—from Calculus—
from Malignant disease, &c.*

MR. PRESIDENT AND GENTLEMEN,—I shall occupy the present lecture in treating of the pathological considerations to which we should be led when blood or its constituents appear in the urine. Blood may exist in the urine in the entire form, and show itself by its red colour, and by the presence of its corpuscles when examined microscopically; or, on the other hand, its colourless constituents may be effused, and the aid of chemistry required for their detection. When blood is effused in any quantity, and in its entire form, the urinary passages, the prostate gland, the bladder and kidneys, all require to be considered. Unless the result of inquiry be such as to exclude the bladder, prostate, and urethra, from the consideration, it is necessary that the sound should be resorted to, and digital examination made by the rectum. In this way calculus or malignant disease in the bladder, or disease of the prostate, may be detected as probable causes for the production of hæmorrhage.

The treatment of the diseased conditions of these parts is so much the province of the surgeon that I shall not presume to consider the subject here, further than to counsel physicians to remember its importance, and the necessity of immediate inquiry being made whenever hæmaturia cannot be satisfactorily explained on other grounds. I may state, however, that the quantity of blood which appears in the urine from malignant disease of the bladder is sometimes very great, and will blanch or even threaten the immediate dissolution of the patient.

Before I proceed further on this part of my subject, I shall direct your attention to one or two points connected with the examination of urine containing blood. And first with respect to the recognition of the blood corpuscles under the micro-

scope. These bodies, as they float in urine, are seldom seen precisely as they appear in serum. They are thicker at their edges, and the colouring matter within them is paler. This condition is caused by the entrance of urine into the corpuscle—an effect which occurs in virtue of the law of endosmosis. The blood-corpuscle naturally contains within its membrane a fluid of the same specific gravity as the liquor sanguinis; and when, therefore, it comes in contact with the urine, which is far below the specific gravity of the liquor sanguinis, endosmotic currents are immediately set up, an interchange takes place between the contents of the corpuscle and the urine without, and, as the urine is of less specific gravity than the contents of the corpuscle, the interchange takes place in such manner that it enters the corpuscle in greater proportion than the contents pass out; and thus the body becomes distended.

I shall hereafter have occasion to allude to the presence of pus and mucus in the urine, together with blood, and to the importance of detecting them, inasmuch as we are thereby greatly assisted in our diagnosis in certain obscure cases of hæmorrhage; and I will therefore now describe the appearances presented by pus and mucus when so observed. Pus and mucus corpuscles are both larger than those of the blood: they are colourless, and variegated on their surface: whereas the blood corpuscle is smooth and of a light yellow colour. The pus corpuscle very closely resembles the mucus; but, if carefully examined, we observe that it is dotted and granular rather than variegated on the surface, and of looser texture than the mucus corpuscle. The reactions of urine containing blood are easily appreciated; and there is but one source of fallacy to which it is necessary to direct your attention. This consists in a condition of urine which will seldom be present to confuse you, and I have not seen it more than twice. I allude to the brilliant red colour sometimes produced in urine by certain articles of diet. Many vegetable matters colour the urine of a fine amber colour; the pyrola and sumach possess this property in a marked degree. Sometimes this colour will nearly approach to red; and occasionally, when beetroot has been eaten, the colour observed in the urine is so completely that of blood, that it is impossible to discriminate without having recourse to the use of reagents. The distinction is easily made, however. If the urine be tested by the liquor potassæ, a dirty brownish precipitate is produced if the colour be owing to blood; but, in the case of vegetable colouring matter, the urine will become of a fine green tint.

When blood is present as a deposit in urine, in any quantity, we may be sure that albumen exists in solution; and it is important that we should know, within certain limits, the corresponding degree to which we may expect the urine to be albuminous for any given quantity of red corpuseles which may appear in it. An approach to tolerable exactness may be attained by practice and attention to this point; and it is one of great value in the diagnosis of urinary diseases. When we boil urine containing albumen, if it be acid, as is generally the case, a precipitate is produced. Now when blood is present, you will be surprised how much of it is required to produce an amount of albuminous precipitate such as characterises cases of ordinary albuminuria. Unless, indeed, the urine present the appearance of being made up in very large proportion of blood, the amount of albumen will generally be trivial. This will not appear extraordinary to those who are in the habit of observing how much show a little blood can make; and the quantity of albumen in the urine of morbus Brightii may well appear comparatively great, when it often amounts to as much as indicates the disintegration of several ounces of blood per diem; and one ounce of blood will make a great show in the quantity of urine passed in twenty-four hours. The importance of paying attention, then, to this point, principally consists in our being able occasionally to detect the morbus Brightii by showing an amount of albumen in the urine far above that indicated by the red corpuseles present.

Returning to the pathology of the subject, let us now assume that careful examination of the bladder and prostate gland has satisfactorily shown that the kidneys or ureters are the source whence the blood contained in the urine must be derived, and consider to what conditions of those parts the hæmorrhage should be attributed. First as regards idiopathic hæmaturia. This bleeding from the surfaces of the kidney, without any especial cause beyond exposure to cold or to the vicissitudes of climate in warm and damp localities, has been considered as rare by most writers. For my own part, it has so frequently occurred to me to detect the cause of such hæmorrhage in lesion of some organ, that I am much inclined to deny hæmaturia ever occurs, except as an indication of decided disease of the kidney or other part of the urinary apparatus. It is true that idiopathic hæmaturia sometimes occurs, together with hæmorrhage from other mucous surfaces, in those who ascend to great heights, and who consequently suffer the loss of that amount of atmospheric pressure which preserves the conditions of equi-

librium necessary to the safe circulation of the blood; but we may at once exclude such cases as these from the consideration.

With respect to the appearance of the urine, Dr. Prout considered that, when blood tintured the whole fluid, appearing equally dissolved throughout it, that the kidneys were generally involved. This is an observation which experience certainly verifies. When such an appearance is observed, however, it coexists or alternates generally with blood as a deposit, and we may conclude that there is calculus in the kidney, or that the organ is the subject of other diseased condition, attended either with great congestion, granular deposit, or malignant disease. The detection of the real state of matters becomes very important in such cases. The symptom is a prominent one, and the patient's friends are sure to press the practitioner urgently for his prognosis. Now, though in most cases, if calculus be present, the history or severity of symptoms will assist us at once to the truth, yet it sometimes happens that such evidence is not afforded; and this is more especially the case when oxalate of lime calculi are contained in the kidneys. Under these conditions the urine may be bloody, and no other symptoms observed beyond dull lumbar pains. If oxalate of lime crystals exist in the urine, there is also pain in the penis, which does not affect the glans penis, as in stone in the bladder; but, on the contrary, is most plainly felt at the root of the organ.

Now, though in these cases the hæmorrhage will generally follow upon some unwonted exertion, still it is not always so, and the case is thus greatly obscured; for we lose a most important adjuvant to our diagnosis. If the hæmorrhage is the result of any of those chronic states of disease to which the name "morbus Brightii" has been given, we may easily detect that it is so, for then the hæmorrhage which may occur will soon be found to give place to other conditions, in which the colourless matters of the blood alone become effused. We have here only to wait; and, whenever the urine may be excreted of its natural colour, to test it for the presence of albumen; and, if this principle then be present in any quantity, without the colouring matter of the blood, we may be nearly certain that the further progress of the case will be marked by the continued excretion of natural-coloured urine containing albumen, and not by hæmorrhage, and that the patient is suffering from some form of the morbus Brightii.

If, however, the urine, on becoming of its natural colour after an attack of hæmaturia, does not prove to contain albumen,

then we may feel nearly sure that the hæmorrhage proceeded either from a calculus in the kidney, or some malignant disease of the organ.

The diagnosis between these two conditions must depend on the observation of the following points :—

1st. In malignant disease the blood is generally passed in larger quantity than in calculus of the kidney.

2dly. There is more frequent tendency to nausea *on slight occasion* than in calculus disease.

3dly. Microscopic examination of the urine will frequently show pus or mucus in excess, if there be calculus; whereas, in malignant disease, this sign does not so frequently exist.

4thly. The appearance of those suffering from malignant disease of the kidney is nearly always indicative of a state of anæmia more or less advanced.

5thly. In calculus, hæmaturia generally follows upon some unwonted exertion.

6thly. Careful examination of the abdomen will frequently lead to the detection of tumour if there be malignant disease of the kidney.

With respect to this last indication, I have, after careful examination, succeeded in detecting tumour of the abdomen in several cases in which the origin of the hæmaturia was very obscure. It is always right, indeed, to make this kind of exploration whenever such cases are presented to us, and it should be several times repeated if nothing be detected at first. The bowels should be emptied by the action of aromatic purgative medicines, and the patient so placed during examination that the abdominal muscles be rendered as flaccid as possible. With respect to the use of purgatives, their exhibition previous to these explorations is often absolutely necessary before we can hope to arrive at the truth, should renal tumour be commencing. I lately saw a case of this kind, in which the origin of the hæmaturia was very uncertain until purgatives had been exhibited for several days, when the whole mystery was cleared up by the discovery of a tumour in the left lumbar region. In this case, as in several others I had previously seen, I was at first so completely foiled in detecting a cause for the appearance of blood in the urine that I was nearly making up my mind that the whole mischief must consist in transudation from the urinary mucous surfaces. There was such slight lumbar uneasiness, and the history of the case was so deficient in symptoms, that it was scarcely possible the hæmorrhage could have been caused by the presence of a calculus, and the renal

tumour had become developed with scarcely any other symptom than hæmaturia.

In this class of cases it sometimes happens that we are unable to detect any enlargement of the kidney up to a very late period. The symptoms will be slight. There may be, perhaps, more irritability of stomach than is usually characteristic of dyspepsia,—slight lumbar pains, and lassitude. The urine may contain blood but seldom, and weeks, and even months, pass without hæmorrhage. I speak now of such hæmorrhage as can be detected by the naked eye. If, however, we have recourse to microscopical examination of the urine from time to time, the case appears differently. We shall then find that blood corpuscles are nearly every day passing away in small number. These may be detected by allowing the urine to subside in a tall glass vessel, and then examining the deposit. It is always right, when hæmorrhage has been observed from the kidney, that the urine should be examined at intervals by the microscope. We thus have a means of ascertaining more correctly the effects of exertion in the production of hæmorrhage. A patient may tell you that he can ride, run, or row, without producing hæmaturia; but after such exertion, if he be the subject of calculus in the kidney, we shall always be able to detect blood corpuscles by the microscope, even though he betray no other symptom of the disease. It must be remembered that in treating of the diagnosis between calculus in the kidney and malignant disease of the organ, I am directing your attention to such cases of calculus as you will only occasionally meet with. In general the diagnosis is easy enough. Thus the patient will generally have, in connection with hæmaturia, severe loin pains, causing vomiting and retraction of the testicle, and other symptoms, clearly pointing out the true nature of the case; but the equivocal cases I am here alluding to are sufficiently common to make their study of some importance to the practitioner.

To sum up, I should say, in the first place exclude from the consideration cases of what has been called idiopathic hæmaturia, which can scarcely exist under ordinary barometrical conditions; secondly, determine that the case does not belong to the morbus Brightii, by ascertaining that when the red particles cease to appear the albumen also leaves the urine; and, thirdly, when the hæmorrhage observed is placed within these limits, determine whether it be owing to calculus in the kidney, or to malignant disease, by especial attention to the following points :—The appearance and complexion of the patient; the presence or absence of nausea on slight occasion; the presence or

absence of pus and mucus in the urine mixed with blood corpuscles; and, lastly, by careful exploration of the abdomen for the detection of tumour.

Now as regards the treatment of the two forms of hæmaturia I have been speaking of,—viz. that produced by calculus in the kidney, and that which is the consequence of malignant disease.

From what I have already brought before you with respect to the treatment of alkaline urine, as produced by irritation of the urinary mucous surface, you will at once perceive that the condition brought about by the existence of a calculus can never be benefited by the exhibition of other than demulcent and alkaline remedies. It matters not how the calculus may be composed,—be it uric acid, oxalate of lime, or phosphatic,—be it soluble in acids or alkalis,—we cannot treat it chemically while in the kidney. Our object must be to render the urine as unirritating to the mucous membrane as possible, and enable that membrane thus to bear the presence of the calculus with as little inconvenience as possible. There is another indication, however, which we answer by this alkaline and demulcent plan, and a most important one. It consists in the relaxation of the spasm of the canal. By effecting this, a small calculus may often be brought away which otherwise might remain to increase, and perhaps destroy the patient. It is with this view that we should combine our demulcent and alkaline remedies with such sedatives as the patient can bear without disturbance of stomach. Our most favourable result, of course, will be the expulsion of the calculus. Next to this we must hope that it will become encysted, and, by being so fixed in the kidney, cease to cause irritation; while we have to fear, as the worst result, the setting up of inflammatory action in the body of the kidney. This may terminate in the effusion of lymph in the tissue of the organ, and to a subsequent contraction of the inflamed part; and sometimes the patient may be so fortunate under these circumstances as to have the calculus which has caused the acute nephritis, should it be a small one, impacted in the kidney, so as to create no further irritation. In a great many of these cases, however, the acute nephritis terminates in suppurative disease; and, if there be any constitutional imperfection dependent on strumous or syphilitic taint, this is the way in which we may generally expect the case to end. All we can do under these circumstances is to support our patient, exhibit opiates, and render the renal secretion as unirritating as possible. It is absolutely

necessary that such persons should avoid exercise in any way beyond that necessary to walking gently, or exercise in an easy carriage. Neglect of this doubles the danger to the patient, while the difficulty of enforcing the injunction is often very great.

With respect to the treatment of cases in which the hæmaturia depends on malignant disease of the kidney, of course we cannot proceed with any hope of cure; but much may be done by attention to the general health, and by relieving those symptoms which arise as the result of the hæmorrhage and the impaired state of the chylopoietic viscera. The anæmia so often noticed in these cases, which causes dyspnoea on slight exertion, and restless nights (from the facility with which any error in diet produces palpitation and throbbing of the carotids,) may be to a great extent combated by the exhibition of iron in some palatable form. Perhaps the best preparation for the purpose is the *Tinctura Ferri Sesquichloridi*, taken in doses of from *℥x.* to *℥xx.* three times a day, the bowels being watched the while, and kept regular by the exhibition of mild and aromatic laxative medicines.

It may be objected to the use of iron that it frequently tends to produce hæmorrhage, and that we ought scarcely, therefore, to exhibit it; and it is quite true that care is necessary on this point. Watch the effects of the remedy, however, and you will constantly find you can exhibit it with advantage; that it will not induce hæmaturia, and especially if it be exhibited in the form of the sesquichloride of iron tincture. With regard to the use of styptics, they frequently appear useful in cases where the disease is not much advanced. One of the best I know, and which I have used several times of late, is the tannic acid, exhibited, if necessary, at intervals between the doses of iron in the form of pill. The dose should be from four to eight grains three times in the day. I may here remark, with respect to the use of this remedy, that, if you wish it should reach the stomach as tannic acid, you must not exhibit it in solution. You may, if you do so, have the good luck to give the first dose before it becomes changed; but tannic acid is rapidly converted into gallic acid when dissolved, and the best means of exhibiting it unchanged is in the form of pill.

I now come to the consideration of those cases in which the urine contains the colourless matters of the blood; and inasmuch as, unlike hæmaturia, these indications do not admit of being detected so palpably by the senses, they are very frequently overlooked.

I will first bring before your notice the symptom of albumen in the urine,—a con-

dition to which the attention of the medical profession has now been directed for many years, and which forms the leading feature of the disease called morbus Brightii. I shall not now describe the methods of detecting the presence of albumen, but, assuming the fact established, I shall beg your attention to the pathological considerations of which it is suggestive in the present state of our knowledge.

When Dr. Bright published his views on this subject, and declared his belief that an albuminous condition of the urine indicated a peculiar state of kidney, which commenced in congestion and terminated in the deposit of an adventitious matter in the tissue of the organ, some doubt was felt among pathologists as to the symptom indicating the condition described with any great degree of accuracy. It was thought improbable that the state of kidney noticed by Dr. Bright could be the only cause capable of producing albuminous urine; and some were even so bold as to assert that many articles of food would produce a similar effect on the excretion. The exhibition of certain remedies also, and various pathological conditions, were quoted, which theory suggested as capable of bringing about the result; and, what with intrepid assertion on the one hand, and plausible reasoning on the other, considerable doubt was for some time cast on the diagnostic value of albumen in the urine. Among the articles of diet said to produce albuminuria I may mention pastry, milk, and cheese. Among medicines, some diuretics were thought capable of producing a similar effect; and mercury, if exhibited to salivation, was confidently spoken of as a cause for albuminous urine. The pathological states which have been at different times quoted as causes are very various and very numerous:—typhoid and typhus fever; certain forms of rheumatism; severe inflammatory affections, &c.

First, then, with respect to articles of diet:—Neither milk, cheese, nor pastry, will produce albuminous urine; nor have I yet been successful in obtaining from those who have made these loose statements a specimen of urine which gave the remotest indication of the presence of albumen, provided it had been previously shown free from that principle. I have also failed to detect albumen in the urine where diuretics have been given medicinally, though it is possible that in poisonous doses some of these may produce the effect. In poisoning by cantharides, albumen appears with blood in the urine: but such cases as these are scarcely likely to confuse your diagnosis. With respect to mercury, the impression was so strong on the minds of

some that it always produced albuminous urine when exhibited in large quantity, that a few years ago I was at the pains of carefully examining the urine of persons who were undergoing salivation for syphilitic disease at Guy's Hospital, taking care to test the urine of each case before the exhibition of the remedy. In these experiments I entirely failed to detect albumen, and I have no doubt that the conclusion above alluded to was arrived at on theoretical grounds.

CASE OF FEIGNED INSANITY.

THE *Gazette Médicale Lombarde* reports the case of a young herdsman, seventeen years of age, who, having violated a child seven years old, killed her on the spot by a blow on the head. When arrested, he stated that he had been urged to the commission of the deed by the devil. On the day following his imprisonment, this youth, who was remarkable for his gaiety and intelligence, was found in a state of almost complete imbecility, unable to make a single step without trembling and crouching down, his head bent forward and inclined to one side, his speech incoherent and stammering, not giving any collected answers to the questions put to him. He did not seem at all conscious of the fate that awaited him. Two physicians, MM. Windler and Zinek, declared the insanity feigned, upon the ground that they had never known such a form of the malady occurring suddenly at his age. The prisoner was subjected to the closest surveillance, but he was in everything consistent with his disease. Recourse was had to stratagem; his couch was set on fire, water was unexpectedly poured upon him through the windows of his cell; but he remained impassive beyond faint inarticulate cries.

The physicians nevertheless persisted in their opinion. When put upon his trial, the prisoner answered no questions, seeming to doze, and preserved throughout the same impassibility. The jury found him guilty of the crime, but admitted his insanity in extenuation! He was condemned for three years to the House of Detention. Returned to his cell, the prisoner, finding that he had escaped capital punishment, declared that he had been perfectly sane since his arrest, and that he had simulated idiocy at the suggestion of a fellow-prisoner.

There are few instances on record of feigned madness carried so far, or persisted in for so long a time, under the circumstances.—*L'Union Médicale*.

Original Communications.

INFANTILE REMITTENT FEVER,

WITH ESPECIAL REFERENCE TO ITS
DIAGNOSIS FROM HYDROCEPHALUS.

By CHARLES TAYLOR, M.R.C.S.

Late Surgeon to the Royal South London
Dispensary.

[Continued from last vol. p. 1031.]

V. *Brain Affection.*

Of all the diseases with which remittent fever may be confounded, or of the complications which may arise in its course, brain affection, in whatever degree or form it occurs, is the most important, whether we regard it in reference to the diagnosis, the treatment, or the probable termination of the case.

A. *Sympathetic disturbance.*—As I have previously remarked, disturbance of the nervous centres is met with, in the majority of cases; in the mildest cases,—merely as starting in the sleep, talking, and slight delirium; but in younger children, and in the acute form, the disease occasionally commences with an attack of convulsion, as sometimes occurs in the exanthemata (see Case XIX). In the more severe cases, together with the delirium, stupor ensues; and these require to be detected from the more serious signs of cerebral disturbance. In general, there will be no great difficulty in this; for, as Dr. West says, “the stupor of fever is so different from the coma which supervenes on brain affection, and the insensibility which characterizes it is so much less profound, that one can hardly be mistaken for the other.” The delirium in remittent fever is generally during the night, or, if otherwise, when the paroxysm of fever is present: this circumstance, together with the absence of other symptoms, will tend to distinguish this state from more decided signs of inflammation. But at this time the greatest care is necessary in watching the child, especially if there is any family tendency to brain disease; for sometimes cases terminate fatally, and little or nothing is found to account for the cause of death. This is noticed by Dr. West. Dr. Willshire also gives a case

in point, of a boy, aged two years, with remittent fever, who, having some slight brain symptoms, died, and only slight meningeal congestion was found.

CASE XIX.—*Acute Remittent Fever, with Convulsion at onset.*

In Sept. 1847, a boy, æt. 7, came under my care, residing in East Street, Waltham, an unhealthy locality; at the time, fever of a peculiar type was prevalent, both among children and adults. It was characterized by loaded white tongue, afterwards having a shiny tip, and much gastric and intestinal irritation, as evinced by nausea, vomiting, and diarrhoea, and much jactitation of limbs, soon becoming typhoid, and requiring the use of wine and stimulants. This boy had been ailing for some few days, with a tendency to diarrhoea, and he was badly fed, when he was suddenly attacked by convulsion. This convulsion was repeated: together with this there were some cerebral symptoms, as headache, nausea. Although debilitated, I applied two leeches to the temple, which were repeated. The fit did not return, and in the course of the next day the disease developed itself more clearly as the fever, which was at that time both epidemic and endemic. The spirit lotion was applied to the head; the diarrhoea attended to. Effervescing mixture with ammonia was given, and afterwards ammonia and serpentary wine, and quinine, and he eventually recovered in about five weeks from the time of his attack.

CASE XX.—*Acute Remittent Fever, with Gastric Disturbance and Head Symptoms.*

J. R., æt. 7. Female. March 9th, 1849. Residing in Rotherhithe: has been ill one week: according to her mother's account, she has been ailing and feverish, the fever coming on regularly towards evening, during the last week. She was first attacked with nausea, vomiting, and headache. Her present appearance is languid, eyes heavy, aspect dull, great heat of skin; pulse very quick, scarcely to be felt. Her mother says her motions have been very offensive, like corruption. She complains of much pain over the forehead, with nausea, but no vomiting. The tongue is furred, loaded even to the apex, the papillæ raised and reddened. She is roused with much difficulty.

The head to be kept cool by evaporating lotion, and the soda mixture every six or eight hours.

13th.—Tongue much cleaner.—Liq. Ammon. Acetat., with Infus. Serpenty, t. d.

14th.—The remissions becoming more evident.—Quiniæ Disulph., gr. j., t. d.

She became convalescent in a fortnight from the beginning of the treatment.

Diagnosis from Hydrocephalus.

Before considering the diagnosis between remittent fever and hydrocephalus, it will be well to understand rightly what we allude to as constituting hydrocephalus, for even at the present time it is a term upon which the opinion of authors vary. The old authors always referred those cases to hydrocephalus where, after death, effusion was discovered, either in the ventricles of the brain, or under the arachnoid membrane. After a time, however, it was shown that many children died of symptoms of hydrocephalus, and yet this effusion was not present, or perhaps any important lesion whatever, in the cranium.

In 1840, Dr. Bennett remarks that Ruz, Gherard, Dance, and Piet, observed the pia mater sprinkled with hard grey or yellowish semi-transparent granulations, which by some have been considered to be enlarged glands of Pacchioni, by others coagulable lymph, or miliary tubercles. In his own experience he says—"where he has observed these bodies in children dying under meningeal inflammation, he has found in *every* instance tubercles in other organs." This remark, however, shows that at that time the existence of tubercles in *all* cases was questionable, or at least their nature and appearance were not known so well as in every instance to be detected.* Dr. Hope† described hydrocephalus under the term of "meningo cerebritis," and said "it is to be regarded only as a modification or variety of cerebral inflammation."

* A case is related by Dr. Cheyne, of remittent fever, terminating in scrofulous hydrocephalus, where, besides inflammatory appearances of the brain and its membranes, and effusion to a large extent, tubercles in the liver were found, "and several little papulous eminences" (tubercles?) "over the plexus choroides."—P. 205, Dissection ii.

† Library of Pract. Med., vol. ii., art. Inflammation of the Brain.

Latterly we find authors restricting the term hydrocephalus to scrofulous inflammation, where tubercles have been discovered after death, either in the membranes or substance of the brain (Rilliet and Barthez, West).

Churchill, in his late work, says—"an attempt has been made to distinguish between simple acute, and tubercular meningitis, but, I think, without success, except in extreme cases." Considering the avowed difficulty in determining whether cerebral inflammation is of a simple or scrofulous nature, I shall not make the distinction, but merely remark that the supervention of hydrocephalus is more frequent and more to be suspected in scrofulous children.

B. Diagnosis between Acute Remittent Fever and Acute Hydrocephalus.

The difficulty of diagnosis between these two forms of disease in some cases is very great, and has been insisted on by many; not so, however, by others. As before remarked, in speaking of the nature of the disease, different authors have described different forms of the disease, and hence their diagnosis is different; for while one (West) draws a diagnosis between the acute form of both diseases, another (Locock) says—"in the acute form of either disease the mistake is unlikely to occur." This may, I believe, be accounted for by regarding Dr. Locock's "infantile remittent fever" as a different form of disease to acute malarial remittent fever.

Dr. Joy considers the rapid form of hydrocephalus "bears so strong a resemblance to fever as to have been confounded with it."

Cheyne also says—"this is the form (the acute) in which there is the greatest resemblance between the two diseases." Again: "Hydrocephalus resembles several forms of fever, but none so much as acute infantile remittent fever," and draws his distinction "by the regular and complete remissions, and the fetid, dark, and brown mud stools of the latter;" and further remarks—"We must particularly attend to the *train* of symptoms, the *gradual* commencement of hydrocephalus, the more regular remissions, the dyspeptic symptoms, the nature of the excretions, particularly the dark, glairy, and unnatural stools;

the aversion to light, and the whole expression of the disease, the peculiar pains in the head in hydrocephalus differing so much from fever."

Dr. Sims "believed, under five or six years of age, the diagnosis was often impracticable until within a few days of death."

Dr. Copland thus draws the diagnosis between acute hydrocephalus and acute remittent fever:—"the former is characterised by somnolency, knitting of the brows, great irritability of stomach, which is increased by motion and the erect posture, by the raising of the hands to the head, throwing back the neck, the excitability and irregularity of the pulse, the peculiar character of the evacuations, and obstinate costiveness; by the pains shooting in various parts, and the overpowering headache, the starting peculiar scream, and the expression of anguish when the child is waked by it from dozing. The latter is distinguished by the absence of the above symptoms, by the expression, by the regular morning remissions, by the peculiar and more easily procured evacuations."

Dr. West points out most carefully the following diagnostic distinction between the two acute affections:—"The *vomiting*, which indicates approaching hydrocephalus, is often *absent*, even at the onset of remittent fever; it *soon* ceases, and is not followed by that *abiding nausea* which is so frequent in hydrocephalus. In remittent fever the bowels are often relaxed from the first, or speedily become so, and the evacuations present no resemblance to the scanty, dark, or many-coloured motions of hydrocephalus, but are watery, fæcal, and of a light colour." There is "tenderness of abdomen in remittent fever, and wind is always felt in the intestines, in contra-distinction to the flat belly of hydrocephalus." "In hydrocephalus there is a distaste for drinks as well as food: in remittent fever there is a desire for drink, especially cold, even though the appetite is gone."

"In hydrocephalus the temperature is seldom much increased, and there is great dryness of the surface: in remittent fever the heat of skin is pungent, and greater than in hydrocephalus."

"In remittent fever the pulse is quicker, and remains quick throughout, and never becomes unequal or irregular, while its frequency is in direct propor-

tion to the elevation of temperature of the surface.

In remittent fever the child makes few complaints about the head, and delirium is of early occurrence, especially at night. In hydrocephalus, on the contrary, true delirium hardly ever occurs till the advanced period of the disease, and occasionally is absent altogether.

"In remittent fever, as the name implies, there are distinct remissions and exacerbations of symptoms; whilst, though there are many fluctuations in hydrocephalus, we observe no definite period at which the symptoms remit, or are increased in severity."

Nevertheless, with the preceding minute and carefully described directions, it must not be forgotten that, in the acute form of remittent fever, cases sometimes occur which, in the onset, have many of the usual symptoms of hydrocephalus; and in such cases our diagnosis will fairly be put to the test, more especially if there is, in addition, great sympathetic disturbance of the sensorium; for the early symptoms of hydrocephalus are so little to be relied upon, as almost every symptom may occur in other diseases. As Dr. Bennett says:—"For the most part, they only indicate derangement of the nervous system and general health, and are not peculiarly pathognomonic of hydrocephalus." The symptoms common to the two diseases at the commencement are fever, quick pulse, vomiting, and cerebral disturbance; but, in the majority of instances, there are distinctive marks which I shall now endeavour to explain.

We find in hydrocephalus the fever and heat of skin are much less than in remittent fever: the pulse in both is quick; but in hydrocephalus it is often vibrating, and occasionally intermitting and irregular in its action, frequently quick at one time and slower at another: sickness, which is not a constant but merely an occasional symptom of remittent fever, is almost constant at the onset of hydrocephalus. In this latter there is much greater pain in the head, as indicated by screaming, aversion to noise and light, and contracted pupils, than in remittent fever; in hydrocephalus the anterior fontanelle is often prominent. In the one the countenance is of an anxious appearance; in the other, it partakes more of a

stupid aspect. In hydrocephalus there is, in the early stage, constipation, which is persistent, and with difficulty overcome; whilst, in remittent fever, there is rather a disordered condition of the bowels, not necessarily nor generally accompanied by great constipation, but, on the contrary, at times with diarrhœa. In remittent fever the stools are those of depraved secretion, generally pale, and deficient in bile; whilst in hydrocephalus, when the bowels do act, there is a peculiar character of stool which is so characteristic as to have been called "hydrocephalic stools," of a dark, green, slimy consistence, and compared to chopped spinach, and frequently having with them small portions of hard scybalous matter, the size of a small marble. In remittent fever the disease assumes mostly a decided and well-marked remittent character, or at least has a tendency to a remittent form; whilst in hydrocephalus, although the condition of the patient varies, there is no distinct and regular periodical character to the disease.

As the case advances, if it is one of hydrocephalus, more decided symptoms will set in, so as to leave less doubt as to its nature; such as convulsion, paralysis, coma; the piercing and characteristic "cri hydrecephalique," the drawing of the head backwards, the constant and unremitting "boring" of the occiput on the pillow or the nurse's arms, the alteration in the character of the pulse, which, from being quick, now becomes slow; while, on the contrary, if it be remittent fever, the further development of the disease, and the more regular periodic nature, will aid us in our diagnosis.

It is not frequent that we shall be doubtful in our diagnosis in the typhoid form of remittent fever; for here the prostration of strength, the dull vacant aspect, the sordes on the teeth and gums, the tongue becoming dry and brown, the supine posture, will sufficiently prevent us in mistaking it for hydrocephalus.

CASE XXI.—*Illustrating the diagnosis of Hydrocephalus and Acute Remittent Fever.*

Mrs. R.'s child, male, æt. 3½. Two weeks since the child fell into a stinking tidal ditch, since which time he has not been well. His appearance is dull and heavy; constant frowning; much

inclined to sleep; has frequent sickness; pulse 120. There is not much fever, and no delirium at night; the bowels have been acted on by medicine. Being somewhat in doubt whether this attack was cerebral, or one of fever from his immersion in the ditch and residence close by it, I was induced to treat it as cerebral, from the frequent sickness, frowning, and contracted pupils, together with the absence of fever and delirium. A mercurial purgative was given, and Hydrarg. Chloridi, gr. j. every three hours, with cold lotion to the head and warm foot-bath. The powders were continued for 48 hours, and then given less frequently, and he was convalescent in a week. At the commencement the diagnosis was doubtful, but the result justified the diagnosis and treatment.

A case of acute remittent fever, coming on after a child fell into a stinking ditch, was pointed out to me in Guy's Hospital by Dr. Golding Bird.

CASE XXII.—*Acute Remittent Fever, with Hydrocephalic Symptoms.*—Abridged from Cheyne's Essay on Hydrocephalus.

A boy, æt. 2, fat, lively, delicate, blue eyes, much neglected in diet.

August 29th (third day of attack).—Flushed, with quick full pulse; breathing very labouring, 76 in the minute, the diaphragm violently heaving, and the chest much raised by inspiration; alternate paleness and flushings; he is quite lethargic, and sleeps with his eyes half closed; in sleep he starts and moans; when taken out of bed he vomited some dark green bile; has a cough, not frequent, and unattended with any pain in the chest; breath offensive; belly costive; stools dark and fetid. Strong calomel and jalap purges were given.

4th day.—Seven or eight dark slimy stools, not fetid; in one there was a lumbricus. Pulse 120; flushed; still dozing, and not roused by lifting him out of bed; picks his nose and grinds his teeth. Calomel and aloes exhibited, but was vomited; then calomel and jalap.

5th day.—Grinding his teeth and lying awake; eye heavy; tongue white and dry; vomiting ceased during the night; had several hydrocephalic stools.

7th day.—Ilad tartar emetic given;

several stools, dark green, more fetid, and mixed with bile.

9th day.—The last two days appeared to be convalescent, but his stools were again become scanty; night restless, often feebly tossing his hands in restless anxiety; skin hot; tongue dry.

12th day.—Worse; no stool for three days, nor urine for 18 hours. Pupil much dilated; supposed to be blind the last three days.

13th day.—Passed much liquid fæces, quite black and intolerably fetid; pulse 140; eye again expressive, and pupil contracting.

15th day.—Seven or eight dark green fetid stools; and convalescing.

Remittent Fever.

Head, slight pain in.

Delirium at night frequent; convulsion rare—sometimes at onset.

Easily aroused.

Cry fretful, if any.

Hands usually thrown about bed (Coley). Countenance heavy and dull; vacant expression, as of fever in adult.

“Neither knitting of brows, nor pupil of eye affected.”

Senses of sight and hearing often dull.

Pulse quick throughout the disease.

Bowels occasionally constipated at first; frequently relaxed.

Motions various; often clayey and deficient in bile; very offensive.

Vomiting occasionally at first, but never continuous.

Pain often in iliac regions, particularly the right.

Abdomen in advanced stage sometimes tumid.

Appetite mostly destroyed; will not take anything.

Thirst often great from commencement.

Tongue often loaded with yellowish-white fur, in gastric form, and elongated and injected papillæ, giving it a “strawberry appearance;” red, dry, and occasionally brown, in malarial form.

This case is described as one of acute remittent fever, in which there was lethargy, brought on solely by a disordered state of the abdominal viscera; and, as the cathartic medicines acted, bile was poured out, and the comatose state subsided.

To me it appears rather a case of acute hydrocephalus from the first, or grafted on the fever, and, by his active treatment, recovered.

For the sake of comparing the symptoms of remittent fever and hydrocephalus together, I have drawn out the following table, that, by juxtaposition, the distinction may be more fully seen.

Hydrocephalus.

Head, violent pain in; tossing of; drawn backwards, and bored in pillow.

Delirium seldom; convulsion not early—more towards end of disease; aversion to light and noise.

Roused with difficulty; stertorous breathing; squinting; paralysis in late stage.

Cry peculiar, sharp and shrill; frequent sighing.

Hands tossed towards head.

Countenance sometimes anxious, sometimes dull.

Knitting of brows; wakefulness; pupil of eye contracted in early stage,—sometimes oscillatory, afterwards dilated.

Senses of sight and hearing often acute in early stage.

Pulse quick, but irregular in its action and force in early stage; often beating of carotids, and pulsation and prominence of fontanelle; pulse afterwards becomes slow, but, on raising the child, again quickened.

Bowels constipated, and very difficult to move.

Motions peculiar and characteristic—dark green, and slimy, like chopped spinach.

Vomiting early in first stage; often very constant, especially on assuming the erect posture or sitting up.

Pain occasionally at hypochondrium.

Abdomen drawn in in advanced stage.

Appetite sometimes good; will take food.

Thirst not great in first stage; often in latter stage great avidity for constant drink.

Tongue white; nothing indicative.

Remittent Fever.

Skin, very great heat of, sometimes equal to exanthemata or pneumonia; abdomen generally hotter than head; picking of skin, especially of nostrils, corners of eyes and mouth.

Paroxysms pretty regular; exacerbations towards night, remissions in morning.

Age, seldom occurs under three years, more frequent after fifth year; not influenced by sex or constitution.

Hydrocephalus.

Skin, increased heat of, but not great—less than in remittent fever; afterwards becomes cold; head the hottest part.

Varies in intensity, but without any regularity.

Age, frequent under third year; seldom after fifth year; more frequent in boys and in serofulous constitution; hereditary.

[To be continued.]

A CASE OF
SOFTENING (RAMOLLISSEMENT)
OF THE BRAIN,

WITH GENERAL OBSERVATIONS, INCLUDING
A FEW UPON FATTY DEGENERATION
IN ITS RELATION BOTH TO THAT
DISEASE AND APOPLEXY.

BY WM. FREDERICK BARLOW, M.R.C.S.
Resident Medical Officer to the Westminster
Hospital.

[Concluded from page 20.]

It must always be remembered that, in speaking of softening of the brain, we are referring to an *effect* only, and that there are very different causes of it.* Ramollissement is at one time a disease of old age, and may spring from failure of the cerebral circulation; at another, it is a disease of youth, running a course not to be distinguished from that of arachnitis, and leaving occasionally unmistakeable traces of inflammatory action; at one time it occurs when there is apparently a healthy condition of the arterial system, at another it is connected with those changes of it which are associated with a more or less general tendency to atrophy and degeneration. The facts collected by Dr. Abercrombie and M. Rostan are, though opposite,

* "Softening of the brain occurs under such totally different forms that it cannot be treated of as one general disease."—Rokitansky. In speaking of the difficulties of the diagnosis of ramollissement, I have had before my mind the affection as a whole. There are numerous cases, doubtless, in which the diagnosis leans so much more on the side of ramollissement than aught beside, that it may *almost* be made with certainty. But this cannot be said of others, and especially of those in which coma very abruptly ensues, or paralysis occurs quite suddenly, or there is a course of the affection so extremely like to that of arachnitis that I see not how the difference could be told. We must remember, too, that some cases wherewith softening might be confounded are so infinitely less common that the chances favour us if we infer the latter.

not opposed. "When (says Dr. Abercrombie) we compare the facts alluded to with the observations of M. Rostan and his friends, I think we may arrive at a principle by which the apparent difference may be reconciled. The principle to which I refer is, that this peculiar softening of the cerebral matter is analogous to gangrene in other parts of the body; and that, like gangrene, it may arise from two very different causes—inflammation, and failure of the circulation from disease of the arteries. The former I conceive to be the origin of the affection which I have described, and the latter to be the source of the appearances described by M. Rostan."*

One of the most interesting as well as important points respecting ramollissement is the relation which it holds to fatty degeneration of the arteries. The same may be said of apoplexy. Amongst the facts which might be adduced to show that obstruction of the larger vessels can give rise to ramollissement, two cases, observed and recorded by Mr. Vincent, wherein that affection succeeded to the tying of the carotid artery, may be well mentioned.† The frequent concurrence of degeneration of arteries and apoplectic effusion has long been known. It is remarked by Mr. Gulliver that, "in a man who died of this disease, the coats of the arteries of the brain, even of the smallest branches, were studded with and made fragile by fatty patches."‡ Professor Rokitansky, whose observations rest upon immense experience, alludes especially to fatty degeneration of the middle coats of arteries in cases of this affec-

* On Diseases of the Brain, 4th edition, p. 25.

† Medico-Chirurgical Transactions, vol. xxix. p. 37.

‡ Edinburgh Medical and Surgical Journal, vol. lx. p. 163.

tion, and says, of the well known changes of those vessels:—"Hence it may be inferred that the more minute arteries, and even the capillaries within the brain, are in a similar condition; especially as the former are sometimes found ossified, and the brain filled as if with stiff wires."* But microscopical research was wanting to place the state of the minute vessels beyond dispute; and I must refer to the observations of Mr. Paget, who not long since published an important paper "On Fatty Degeneration of the Small Blood-vessels of the Brain, and its relation to Apoplexy."† "It cannot (he observes) but be that this affection should constitute a predisposition to apoplexy, whether occurring in its simplest form or in connection with cerebral softening." Rokitansky, speaking of disease of the vessels (and assuming, as I suppose, the implication of the minute ones), observes:—"Such a state of the coats appears to some extent necessary as a cause of apoplexy; for it is often observed that the deepest congestions, whatever their nature, but especially those intense mechanical ones which give rise to cyanosis, do not produce apoplexy."‡ It is, doubtless, in those cases wherein fatty degeneration of the smaller vessels of the brain exists that the impeded return of blood from the organ, so much insisted on by Dr. Marshall Hall, is peculiarly dangerous. § And it would be of much moment to know whether some of those cases of epilepsy which pass into, and end mortally by, apoplexy, are not thus fatal because of the small cerebral channels being so diseased as not to be able to resist that distension which the convulsion brings. Let it be always remembered that, whatever may be the bad effects of degeneration of the easily discernible vessels, it is as nothing compared with that of the minute ones: from hence escape those disastrous effusions which either paralyse or strike with apoplexy. That fatty degeneration

which is here referred to means, not a simple *addition* of fat merely, but implies the damage or destruction of the tissues proper to the affected vessels. No longer are they safe channels for the blood to course through; their condition is such that hæmorrhage may surprise at any moment, or softening insidiously begin. But let us turn to Mr. Paget's clear description of it:—"When the fatty degeneration has made much progress, changes in the structure, and, not rarely, changes in the shape also of the affected vessels may be observed. The chief change of structure appears to consist in a gradual wasting of the more developed proper structures of the vessels. Growing fainter in apparently the same proportion as the disease makes progress, the various nuclei or fibres are at length altogether lost, and blood-vessels of even 1-150th of an inch in diameter appear like tubes of homogeneous pellucid membrane, thick-set with the fatty particles. The structures of the vessels are not merely obscured by the abnormal deposits: they waste and totally disappear."

What is the state of the minute vessels in cases of capillary apoplexy wherein patches of hæmorrhage are numerous interspersed throughout the softened tissue? Fatty degeneration of the minute vessels would, in all probability, be found in many of them, and especially in the immediate neighbourhood of the effusions. Dr. Hughes Bennett, in his "Pathological and Histological Researches on Inflammation of the Nervous Centres," speaks repeatedly of exudation-granules coating the vessels of the soft portions of the brain; but Mr. Paget has remarked that Dr. Bennett's "attention being directed primarily to the changes of the structure of the brain itself, and to the products of inflammation in it, he appears to have less minutely examined the state of the blood-vessels in the diseased parts. Some of the appearances produced by fatty degeneration are represented by him (in the Edinburgh Medical and Surgical Journal, vol. lviii. pl. v. fig. 56, and very accurately in vol. lix pl. i. fig. 5); but he refers them to the vessels becoming coated externally with exudation-granules, the products of inflammation." I need not say what a point of magnitude is started here in reference to a theory of

* Rokitansky's Pathological Anatomy (by Mr. Moore), Sydenham Society's edition, vol. iii. p. 399. See also Mr. Gulliver on Fatty Degeneration of the Arteries, Medico-Chirurgical Transactions, vol. xxvi.; and Dr. Copland's preface to his work on Palsy and Apoplexy.

† MEDICAL GAZETTE, 1850.

‡ Op. cit. vol. iii. p. 400.

§ Croonian Lectures, on the Threatenings of Apoplexy and Paralysis, 1851. See also Dr. Burrows and Dr. Watson on the Varying States of the Cerebral Circulation.

the causes of ramollissement. A very elaborate writer on this affection, M. Durand-Fardel (as cited by Dr. Hughes Bennett), has gone the extent of saying that "softening, connected with sanguineous infiltration, is a proof of inflammation;" but the observations of Mr. Paget, to go no farther, would imply this statement to be erroneous.

Rokitansky says that "there is no single cause that will account for the frequent repetition of attacks of apoplexy in many individuals, and its simultaneous appearance at several different spots in the brain, but the presence of disease of the vessels. This also partially explains its happening symmetrically* in corresponding portions of the brain at the same or nearly the same period."†

But now I come to a point which touches the diagnosis of cerebral affections. A knowledge of the *constitutional tendency* is, it is superfluous to state, of the highest consequence in the investigation of disease. We judge often of what a particular part of the body may be doing, by what the whole body seems disposed to do; much, as in the moral world, we interpret an *act* by what we know of the *character*. Now, in the study of diseases of the brain, the pathological tendency often demands the closest inquiry, as the tuberculous affections of that organ well show. Obscure head-symptoms occasionally come before our notice, which may portend nothing of moment, or threaten apoplexy. If apoplexy shall be proved, as I doubt not it will be, an extremely common consequence of fatty degeneration, any clue to the probable progression of the latter in the cerebral vessels will be plainly of value. And may we not find it in the

arcus senilis, which Mr. Canton has proved to be one form of such degeneration, and often associated with other kinds of it? In several cases of apoplectic effusion, which I have lately met with, the *arcus senilis* has been very palpable; and, so far as my observation at present leads me, I should, in certain cases wherein it seems doubtful whether apoplexy be foreshadowed or not, lay considerable stress on the presence or absence of this arc, and the rather if a fatty heart were suspected with reason, or signs of degeneration of the kidneys were evident. I believe, too, that the *arcus* will be found, to *some* extent, diagnostic of ramollissement, especially of that form of it which slowly progresses, and, without any well-marked symptoms of inflammation. Whether it be so or not demands inquiry at any rate.

The *arcus* has already been found of utility in the investigation of heart-disease; and this makes it the more reasonable to believe that it will be of service in exploring affections of the brain.

Mr. Canton found, very early in his inquiry, that the *arcus senilis*, and fatty degeneration of the heart, existed together, and so frequently as to show that the one might be a clue to the presence of the other.* Dr. Williams and Dr. Quain have both tried the arc of the cornea as a diagnostic sign, and bear strong testimony to its use in the investigation of heart affections. That use will, *cæteris paribus*, be found the greatest where it appears considerable before its time; but its amount has yet to be determined by inquiry. Sometimes the arc is seen so soon, that it may be properly termed an *arcus juvenilis*,—an expression which has been already used †

* Probably, the most unvarying form of symmetrical degeneration is that instanced by the *arcus senilis*.

† In like manner, the way wherein fatty degeneration is oftentimes diffused through the arterial system explains the concurrence, recurrence, and, sometimes, the symmetrical disposition of aneurisms, which could only have resulted from the symmetrical disposition of disease of the vessels. As fatty degeneration may exist anywhere in the arterial system, so aneurismal dilatation may anywhere be found. Kölliker and Hasse, and Mr. Paget also, have detected aneurismal capillaries in cases of acute inflammatory softening of the brain.

It will be remembered, of course, that different effects may be traced readily to the varying size of the arteries: thus, with that of the larger cerebral, we directly associate aneurism—with the minuter, apoplexy or softening. The association of the *arcus senilis* and aneurism will be found, probably, very frequent.

* "I have in no instance found this senile arc, when well developed, unaccompanied by fatty degeneration of the heart."—Lancet, May 11th, 1850. Dr. Latham, in his *Lectures on Diseases of the Heart*, vol. ii. p. 166, points out the difficulty of diagnosing a fatty change of the organ, and insists on the importance of attending to the "constitutional peculiarity;" it is as an indication of this that the *arcus* will be proved of value, in helping us to be "able during life to conjecture a fat heart with such strength of probability that we almost know it." See Dr. Ormerod's *Observations on Fatty Degeneration of the Heart*, for some remarks in reference to its diagnosis and history, MEDICAL GAZETTE, 1849.

† By Mr. Wilde. Mr. Lawrence has noticed the arc (instead whereof a most complete circle often happens) at thirty-three years of age; Mr. White Cooper at twenty-eight. Mr. Canton has seen it beginning at sixteen (See Part ii. of Mr. Canton's *Observations*). Dr. Quain tells me

A great part of the interest connected with the whole subject of fatty degeneration lies in its universality, just as its danger consists in its liability to damage, perhaps prematurely, parts necessary to life. See, too, how many phenomena, and what varying consequences, it may produce! Now it encircles the cornea, now stops the heart, now leads to apoplexy, and now (may we not surely say?) to softening of the brain. Mark, moreover, its extreme commonness. Is it not better well to study it than some morbid affection of rare occurrence and strange anatomy? Its relation to many obscure diseases of the nervous system will be found great, I doubt not; and we cannot but believe this, seeing that there is no organ, no part which it affects, that it does not influence *very* commonly. Nor will it be the key only to infirmities of body, but to weaknesses and aberrations of the mind. By involving opposite parts at once, it makes imminent more than one kind of dissolution. It may *simultaneously* impair the irritability of the heart, and damage severely the minute blood-channels of the brain; and could a pathologist bring before his eyes the exact condition of the two organs, he would perhaps be enabled to say which would be the more likely to destroy,—the sudden arrestation of the heart's action or the apoplectic seizure.* All its effects upon the muscular system alone have not been traced as yet. May it not damage the *intestinal* contractility, and so lead to one form of obstinate constipation, and one more especially prevalent in old age?

In speaking of fatty degeneration, I have, of course, borne in mind the wide difference between the deposition of fat on a part or about it, and that serious change which necessarily implies both damaged structure and impaired action. In Dr. Quain's representations, hardly less full of instruction than their originals, this difference is admirably

that he has observed it well marked at seventeen. Mr. Gulliver says of fatty degeneration of the arteries—"though most common in old age, it was twice seen in subjects not past twenty-one, and once in a boy of sixteen." It would be of great interest to examine the small vessels of the brain in cases of *early* apoplexy. Its most usual time of occurrence has been treated of by Dr. Quain, who has analysed a large number of cases in his "Observations on Cerebral Apoplexy, at different periods of life."

* Dr. Quain refers to a death, by apoplexy, of person having a fatty heart.

drawn.* The pathological consequences of that fatty deposit which takes place at the "expense and detriment" of the heart's substance is seen at a glance, for fat is not irritable like muscular fibre, nor will it, like it, respond to stimuli and propel the blood. "The heart is a muscle," as Dr. Latham phrases it, "and its functions flow from its attributes as a muscle;" and this may be advantageously remembered by any one who is at a loss to discover why so much stir, as he may term it, should be made respecting the conversion of its fibres into fat.†

Let me now give an instance of the effect of fatty degeneration of the small blood-vessels of the brain.

Thomas Winfield, æt. 41, having a well-marked arcus senilis, was admitted into the Westminster Hospital, under the care of Dr. Kingston, with an attack of apoplexy of two days' duration, and died in about seven hours afterwards. There was an immense effusion of blood, which seemed to have commenced externally to the left lateral ventricle, to have ruptured its wall, filled it, torn its septum, and then made way into the corresponding cavity, which it nearly occupied. The fourth ventricle was distended with blood. The convolutions of the brain were flattened, and its substance presented numerous red points on being cut, and here and there a pinkish tint. The brain about the clot was greatly softened, and the softening extended some distance into its substance: innumerable little specks of blood were seen on the ragged surface whereon the clot rested. It seems to me very probable that the ramollissement had in part preceded the effusion. Thinking this would be a favourable

* Medico-Chirurgical Transactions, vol. xxxiii.

† It is sufficiently obvious that the *indirect* relations of the fatty heart must be wide and important. All pulmonary and cardiac disorders are, *cæteris paribus*, dangerous in proportion to the degree whereto the irritability of this organ may be lowered. Drowning, hanging, and all kinds of asphyxia, must be modified by this affection. It must affect, also, the results of emotion, of shock, the cause of fevers, and all diseases which risk life by exhaustion. I have some reason to think, too, that the issues of operation and accident may be more or less seriously affected by this oftentimes dangerous change. It is superfluous for me to direct attention to recent researches respecting its nature, and the complete history given of it by Dr. Quain. Some few, in speaking of fatty degeneration, seem to think of the fat and forget the atrophy: it would be more proper to remember the atrophy and forget the fat.

opportunity for repeating Mr. Paget's observations on fatty degeneration of the smaller blood-vessels of the brain, I asked Dr. Charles J. Shearman to examine them with the microscope. He kindly obliged me, and the result was a most obvious demonstration of degene-

ration. When examining the appearances, and comparing with those delineated by Mr. Paget, it was easy to perceive their essential resemblance. Dr. Shearman has given me a drawing and description of the appearances he found.

FIG. 1.

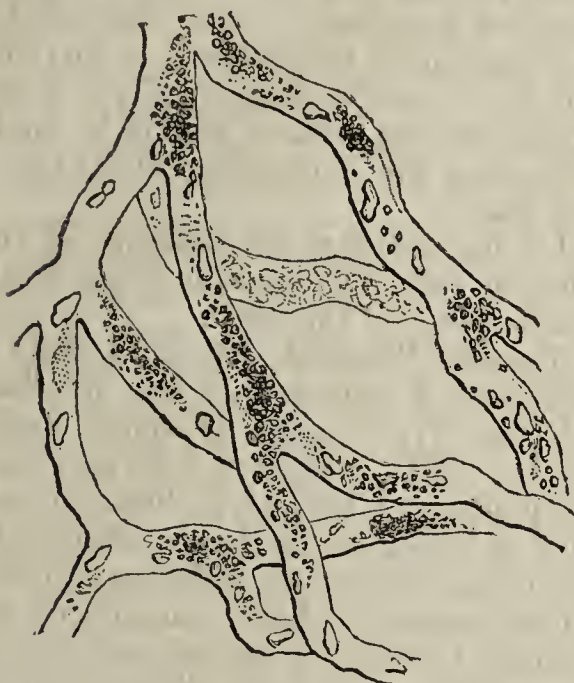


FIG. 3.



FIG. 2.



FIG. 1.

A vessel $\frac{1}{1500}$ inch diameter, with branches up to $\frac{1}{2500}$ th inch; only a single apparent coat; exhibiting persistent nuclei, and fatty granules, of a dark yellow colour, closely aggregated together in the coat. Granules from $\frac{1}{20000}$ th inch to smallest appreciable size.

FIG. 2.

A small vessel, with branches, of diameter $\frac{1}{3000}$ inch, with extremely thin coat, in which are nuclei and fatty granules sparingly distributed. A dilatation of the vessel at *a*, where some fat granules are seen.

FIG. 3.

A vessel, $\frac{1}{375}$ in diameter, the coats thicker, but no vestige of a muscular coat; the fatty granules larger than in figs. 1 and 2, and more closely aggregated. At *a*, branches of smaller size, with considerable fatty degeneration—nuclei visible. This vessel contained some matter, which gave the granules a darker aspect.

In this case the arteries at the base of the brain seemed all but healthy, and they by no means indicated the condition of the smaller channels,—an observation of importance, since it serves to show that, though the great vessels may frequently be a guide to the state of the smaller ones, yet that they are *not* so *invariably*. But the arterial system, taken altogether, would, I believe, had it been thoroughly examined, have disclosed a pretty general and grave degeneration; for the aorta, and abundantly about its arch, manifested fatty deposits, which, on being magnified, presented the appearances that Mr. Gulliver has figured. The small vessels of the brain, as microscopically viewed, presented fat granules, far and wide diffused, and of most varying abundance: here they were clustered very thickly; there they were thinly scattered, and in some spots showed clear interspaces; but the most considerable vessels had suffered most, as was well seen by

comparing one of the diameter of $\frac{1}{375}$ of an inch with another of that of $\frac{1}{1500}$. The appearances are preserved in the drawing, which shows them far better than description could.

This observation must be compared with those already made by Mr. Paget, whose examinations prove the necessity of contrasting vessels of different places and sizes, and those of diseased and healthy portions of brain. Of course the hæmorrhage will be most likely found where the degeneration may be most extreme,—where vessels attenuated, fragile, spoilt, have at length yielded to the pressure of their streams.

The flabby, readily lacerated heart, and those circumscribed effusions of blood into its tissue which Cruveilhier has portrayed, must be likened to softening of the brain and apoplexy; for here, doubtless, are illustrations of the same common, all-pervading disease, or atrophy, though remarkably modified by differences of structure and function.

Let me add here, that the history of cerebral hæmorrhage and softening, as viewed by the light of fatty degeneration, must be studied afresh in reference to treatment and result: the state of the minute vessels clearly explains the too frequent impossibility of preventing the attack and recurrence of apoplexy, and of successfully opposing destructive softening. We may, perchance, if the patient aid us, spare the brain some more or less perilous congestions, and so lengthen somewhat the guarded life; but how far comes it within our scope to stay the course of that atrophy of the blood-channels, wherein, after all, lies the main, perpetual, increasing danger? And the effort to cure many cases of ramollissement which are really dependent on the like condition of the minute vessels will be clearly vain; though medicine be not powerless even here, but adapting itself to circumstances, may, by judicious management and care, succeed to some degree in retarding the affection which it may have no chance of bringing to a happy end.

The following case has occurred since the reading of this paper:—A woman, 73 years of age, was brought, insensible, into the Westminster Hospital at nine o'clock in the evening of the 17th of June, and admitted under the care of Dr. H. Roe. She had fallen suddenly,

as from a blow, upon the pavement, and was lifted up by the police. She was fat, particularly over the abdomen, and had a well-marked arcus senilis. There was the most perfect paralysis and loss of feeling; the pupils were dilated; the breathing stertorous; and there was a mucous râle to be distinguished by the stethoscope, which gradually became louder and louder, and could be heard readily by any by-stander. The pulse was 68; the respiratory movements 36, irregular, and embarrassed; the heart seemed impeded in its action, which was distinctly intermittent; swallowing was difficult, and occasionally a convulsive action of the throat attended it. There was no muscular rigidity, but reflex motions could be excited with facility; the arm was closely drawn to the side on the integuments over the pectoral muscle being sharply pricked; and the slightest impressions on the soles of the feet caused the liveliest retractions of the lower limbs, quick motions of the toes being seen meanwhile. The temperature was low, but rose in a short time. Soon the patient began unmistakably to die; the breathing became frightfully obstructed; the râle was distincter still; the mouth was covered with a white froth; the circulation became weaker and weaker, and death took place four hours and a half from the time of the seizure.

An examination was made thirty hours after death: rigor mortis was fast subsiding.

The scalp contained more fat than usual; the brain was generally flaccid; the convolutions were flattened, and the vessels of its upper surface showed here and there little spots of "atheromatous" deposit. There was an immense effusion of blood, which occupied the place of the lateral ventricles; and there was a great chasm, made principally by the destruction of all the boundaries of the right one. No traces of the septum lucidum could be seen, unless they might be found in some soft and scanty remnants inseparably mingled with the effused blood. The upper and outer wall of the left ventricle remained, and its corpus striatum and thalamus opticus were entire and tolerably firm; those of its fellow were completely broken up.

The effused blood was partly coagulated, and partly not; spoiled cerebral tissue was both in and around it. But there were many minor effusions, with

softening around: one was in the cerebellum, and larger than the rest; the remainder were found in that portion of the brain which lay adjoining the principal effusion, and varied from the size of a small pea unto capillary fineness. These various and separate hæmorrhages would have sufficed of themselves well enough to demonstrate that it was more than one vessel that had yielded. It must be rare for apoplectic hæmorrhage to proceed from a single large vessel: were this more common, we should more frequently meet with blood poured out at the base of the brain, where such channels abound.

On removing the large quantity of blood whereby the centre of the brain was occupied, the large cavity thus exposed, extended, on the right side, both below and laterally, so nearly to the surface of the brain, that a small extension of it would have laid open the arachnoid sac. Its walls (a portion of the left ventricle's boundaries excepted) were softened, flocculent, and red-coloured, from the innumerable points of blood which dotted it. The softening extended into the cerebral substance in different degrees, but here and there very considerably, and was, for the most part, interspersed with minute spots of blood. A little stream of water let fall, or merely blowing upon, the softened parts, tore them most readily.

The vessels at the base of the organ were extensively and extremely degenerated, and, in many places, symmetrically; the internal carotid arteries were changed most considerably, and quite alike. All the arteries were more or less affected, and the atheromatous or fatty deposit was not only seen in specks and patches, but involved their whole circumference for long spaces. The two branches which run upon the corpus callosum were, for the most part, of a yellow colour.

Dr. Charles Shearman examined the vessels of the softened parts microscopically. He describes "the coats of many vessels of from $\frac{1}{3000}$ to $\frac{1}{500}$ inches in diameter as so densely loaded with fat granules, that no muscular fibres could be seen. Those of $\frac{1}{2000}$ and $\frac{1}{3000}$ of an inch were more free, and some entirely so. The larger vessels, which were firm, and felt like cartilage, or even bone, presented a dense layer of fat granules under the serous coat. These were dark yellow, of about the size of

$\frac{1}{2000}$ of an inch in diameter, and had no regular arrangement. There were seen also, and amongst these granules, numerous hard, resistant, earthy scales."

I had the opportunity of observing the changes effected in the smaller vessels; they presented the same appearances as those figured in the former case, and prevailed, *all* the vessels that were examined being considered, to an even yet greater extent. But observations of this kind require patience; the *first* few blood-channels that were submitted presented an insignificant amount of degeneration, notwithstanding it had been established to so marked a degree.

We were only permitted to examine the head; but it would have been well to have noted the condition of the kidneys, and the state of the heart's arteries and fibres. Henceforth it will be of particular interest to compare the condition of the cerebral vessels and cardiac fibres in cases of apoplexy and sudden arrestation of the action of the heart. Fatty degeneration of the latter organ is related to that which may affect the vessels of the brain, not only as an instance of the same pervading atrophy, but in another light. The degenerated heart, as Dr. Quain observes, propels, oftentimes, the blood imperfectly; and thus the circulation through the brain may be obstructed where the small vessels are attenuated, and on the point of rupture.

Cases of *very sudden* death, wherein apoplectic effusion may be discovered, should not preclude an ordinary and microscopical examination of the heart; for it may happen that arrestation of the heart's action was the *real* cause of death, and that the cerebral hæmorrhage was only coincident with that mortal event. I refer in particular to such instances of apoplexy as do *not* explain, either by the *quantity* or *locality* of the hæmorrhage, an *abrupt*, or almost abrupt, dissolution.

What is the explanation of the occurrence of apoplexy at such different periods of life? I would rather have to ask than answer this question fully; but I would take occasion to observe that fatty degeneration may happen in extreme youth. It has to be proved, indeed, that any unbroken limits are set to it by age, though it may be far more common at some periods than others. "Particular ages," says Mr. Hunter, "have their particular diseases;" but

further on, he adds that the middle age "is, as it were, accidentally affected with the diseases both of youth and age, with which it is gradually intermixed."* I have seen apoplexy at every age, save that of infancy. Dr. Quain cites the instance of an infant, *three days* old, who died of an effusion of blood in the cerebral substance. "The tissue was a little softened around it." He refers, also, to cases of the affection observed in early life by MM. Barthez, Rilliet, Serres, Andral, Guersent, Dr. West, and others.

It may be inferred that fatty degeneration *may* spoil very early the small vessels of the brain, from what has been already remarked of the heart. The earliest case of this kind of atrophy of the latter at present recorded which occurs to me at this moment is that mentioned by Dr. Quain in his "abbreviated histories of thirty-three cases" of it. It was observed by Dr. Parkes in a child of *nine*, who died from cancrum oris.† A most unequivocal case of it occurred lately in the Westminster Hospital, in an anæmic boy *six* years old. He was admitted, under Dr. Basham's care, with purpura hæmorrhagica, the spots whereof were the more conspicuous from the blanched appearance of the skin between them. He died of pneumonia of the right lung. The heart was pale and flaccid, and, on being examined microscopically by Dr. C. Shearman, was found with fibres extremely degenerated. Long and uninterrupted rows of fat-granules lay side by side in place of the proper muscular tissue. There was also a considerable quantity of fat lying *upon* the fibres. The kidneys were singularly pale, and might have been likened to veal for whiteness. Dr. Ormerod has observed on the relation of exhausting diseases to fatty degeneration, and Mr. Paget on that of inflammation to the like change.

Fatty degeneration of various kinds most probably occurs at far earlier ages than are generally considered prone to its occurrence.‡ I have already referred to the arc of the cornea as seen in the

young. Dr. Quain told me very recently that he had observed it in an extremely anæmic lad of *fourteen*. Fond of reducing everything to rule, we arbitrarily divide life into ages, and are too apt to measure its energies by its years.

Fatty degeneration may serve well to show the folly of confining the investigation of diseases to *particular* organs. Thus apoplexy has been too much considered and treated of as an exclusively cerebral disease; whereas it is *frequently*, to say the least, the effect of a degeneration which extends, more or less, throughout all the body. It involves together the fibres of the heart and the vessels of the brain, so that it is often hard to predict whether a man shall be destroyed by apoplexy, or die more rapidly from the heart's motion ceasing. Again, an apoplexy that is recovered from is most likely to be followed by another; but death may enter through the heart failing, destroying through the same kind of degeneration, though it seize upon another part. The Hunterian Museum contains a preparation (originally in the collection of my late friend, Mr. Langstaff) of rupture of a fatty heart, the subject whereof had, five months previously, a slight apoplectic fit. Morgagni records a case of apoplexy which was associated with "a heart so covered with fat that none of its muscular substance could be seen."* Such cases would, on inquiry, be found common enough. Degeneration of the kidney should be sought after in connection with them. Dr. Johnson has observed it to be commonly connected with atheromatous deposition in the arteries.

Softening of the heart and brain are, most probably, attended in many instances by the same state of their minute vessels. It is not likely, as Mr. Paget has observed, that the small blood-vessels of the brain should be peculiarly affected by fatty degeneration. It may be rather assumed that the change more or less affects those of other parts. All the systemic arteries are, as we know, but branches of the aorta. We speak of organs as though each had its artery, but this is only for the convenience of anatomy: the physiologist and pathologist must view all structures as supplied by the diverging branches of a single vessel.

* Both these cases are extracted from Dr. Quain's table.

* Works, Palmer's edition, vol. i. p. 344, et seq.

† It would be well to examine the state of the heart in other fatal cases of this destructive affection.

‡ Dr. Crisp refers to a child of *eight*, who had several small atheromatous patches near the origins of the intercostal arteries.—A Treatise on the Structure, Diseases, and Injuries of the Blood-vessels, p. 15.

How much of what has very long puzzled us in the consideration of disease consists essentially in atrophy it would be hard to say; but there can be little doubt that the laws of growth, nutrition, and decay, have been (generally speaking) up to this time far too little investigated. We have but insufficiently attended to the most common modes of dying and death, and so have failed to embrace in one general view phenonema which when isolated cannot be comprehended or applied aright. Our views could scarcely have been so narrow but for that violent separation of physiology and pathology which too many, if not in theory, yet in practice, have made. Studying health more fully, we should have more rationally and profitably contemplated disease. We should have contrasted due nutrition and decline as they are now just beginning to be compared, and have learnt that what we call *sudden* deaths, excluding all those of accident and purpose, often take place in bodies which have been slowly impaired, slowly dissolving. Apoplexy is as abrupt often as the shock of a blow, but time makes way for it by imperceptible degrees; and we must think of the origin and cause of the changes which have brought it about. Of the degenerated heart men seem sometimes to die as from the swift action of hydriocyanic acid, but slow must have been the process whereby the irritable fibre was wasted away, and innumerable fat granules deposited in its room. It is no wonder that parts of the body should be impaired and die, and oftentimes prematurely. The marvel is rather that so commonly for a protracted series of years the function of assimilation be so unerring, that the organs and tissues fail not to preserve their true anatomy and perfect use; that the body, after its full development, should be for a time so lengthened stationary, or change so little as to seem so, though, sooner or later, it must illustrate that great and universal law—“*tout ce qui se perfectionne par progrès périt aussi par progrès.*”*

It was my intention to have cited a few cases to shew the extreme variety of the effects of ramollissement, but my communication is already too extended. M. Rostan has drawn especial

attention to instances wherein there was an absence of precursory signs; and this is one of the principal circumstances which may perplex the diagnosis of these affections. A *progressive* impairment of the mental faculties, attended often by a very gradually established paralysis, together with some creeping impairment of the sensation, is one of the best marks of the disease; it seems altogether wanting in such obscure examples, but perhaps in some of them there was an amount of weakening of the mind, although not plain enough to attract attention. Amongst the matters which may explain the variations of the symptoms of ramollissement may be mentioned the presence or absence of *tumefaction*.* I have made reference to its existence, by way of explaining that irritation of the medulla oblongata which spasmodic actions make evident. The absence, presence, and dissimilar degrees of turgescence, offer the best means also of clearing up some seeming contrarieties touching the condition of volition, sensation, the special senses, the intellectual powers, derangements and impediments of breathing, time and mode of dissolution, &c.† As

* Considering that there is nothing which produces such grave and oftentimes such rapidly fatal symptoms as compression of the brain, no matter whether it be from a depressed bone or from effused blood, there can be no doubt that the tumefaction which may be produced by certain affections of the cerebral substance has been too much overlooked. Professor Rokitansky observes, when speaking of *yellow* softening:—“The presence of a spot of softening occasions more or less turgescence of the diseased portion of the brain, or of the whole organ. The swelling is partly due to displacement, and partly to congestion or œdema of the brain. It is remarkable how much swelling of the brain yellow softening produces. Spots of the size of half a cubic inch, or of a nut, give rise to quite a disproportionate turgescence. Though this may depend in great part upon the œdematous infiltration of the cerebral mass, yet the other cause, viz. the displacement, is not to be overlooked; for the much greater space occupied by the softened portion than by that which is healthy is quite palpable. How great this enlargement is, and the tendency of the diseased portion of the brain to expand, is manifest also from the appearance observed when a section of the part is made.” See *Pathological Anatomy*, translated for the Sydenham Society by Charles Hewitt Moore, vol. iii. p. 420. See, also, p. 400. I have lately seen a case of *red* softening in which tumefaction was most palpable, and must have greatly compressed the surrounding brain. The different conditions of the brain, as to tumefaction, in cases of abscesses and various morbid deposits, would most probably furnish the best explanation of the diversity of symptoms which have attended on them.

† Dr. Marshall Hall particularly adverts to this matter. See *Diseases and Derangements of the Nervous System*, p. 272.

* Pascal.

for those peculiar symptoms which may be associated with that large effusion of blood which may chance to complicate ramollissement, their explanation need not be dwelt upon, for they are easily understood enough; nor need these modifications of cases occupy us which may arise from preceding affections of lungs or heart. Changes of the blood, could we but discover them, might account occasionally for the abrupt coma; and hence the state of the kidney calls for special remark. The coma and convulsions of renal disease are now well recognised, and are too often repeated before our eyes, and that in terrible and impressive form. The glaring fault has been too frequently committed of looking at a part with "microscopic eye," to the utter neglect of that general view which should be taken of the body as an elaborate whole of mutually sustaining, and, under very many circumstances of disease, mutually impairing and destroying organs. Not in this cramped unscientific spirit have our greatest, first of teachers taught. The simplest view of the circulation, respiration, nutrition, excretion, should prevent the most thoughtless from treating of organs as though each were an animal, with its own atmosphere, its own food, its own separate independent life. Those remote organs, the kidneys and brain, are as much linked in function as though they were contiguous—nay, shared one anatomy; yet at first sight, what connection seems there between the excretion of urine and the operations of the mind? But we know well enough that urea whereof the kidneys should purify the blood, may poison as much as opium poisons, and even chance to cause those rapid dissolutions that were ascribed formerly to some cerebral lesion, which examination was vainly industrious to find.* To what extent ramollissement of the brain and degeneration of the kidney are really associated, and how far the one may be modified by the other, is a most fitting subject for grave inquiry, for the sudden and unanticipated supervention of coma in some cases of the former *may* be *sometimes* partly, and at others altogether due, to those altered qualities

of the blood which surely imply the kidneys to be wrong. It must be at once admitted that any cerebral disorder, acute or chronic, would, if perilous, be made yet more so by renal degeneration, for the more damaged an organ is, the more obnoxious becomes it to injurious agencies. Those cases of softening which may happen to be complicated by renal disease should have a separate consideration and record; and in all instances thus involved, the symptoms should be depicted with unusual discrimination. Would we comprehend but a little merely of the long history of cerebral ramollissement, we must apply ourselves as to a hard and complicated question. To attempt the explanation of many of its phenomena by an examination merely of after-death appearances would be sadly puerile. Morbid anatomy is one thing, and pathology another; the latter includes the former in its circle, but only as one of the many means whereby the causes of symptoms can be duly explored.

ON THE
PATHOLOGICAL SIGNIFICATION
OF SOME OF THE EARLY AUS-
CULTATORY SIGNS OF PUL-
MONARY CONSUMPTION,

CONSIDERED WITH REFERENCE TO THE
PRESENCE OF TUBERCLE.

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[Concluded from page 26.]

BUT, while I believe it to be very generally true, that the deposition of tubercle does not take place until the existence of actual inflammation has been fully recognised, I am nevertheless convinced that its earlier stages may be entirely free from such deposit, and that its actual presence has still less to do with the morbid sounds of this inflammatory stage than where it is by chance deposited during that of simple irritation. A consideration of the physical and dynamic conditions of the lung, when it becomes the seat of scrofulous inflammation, will serve to explain this,

* It is needless to make reference to the various researches whereon this statement rests. Dr. Wilson has given some interesting examples of the dissolutions referred to.

together with a glance at the signs by which its different stages are characterised.

Scrofulous or tubercular inflammation of the lung (according to whether it be accompanied by the deposition of tubercle or not) may be divided into three stages—1st, Of Congestion ; 2dly,

Of Inflammation ; 3dly, Of Induration. The first of these is that condition which succeeds to the existence of localised excitation still unsubdued ; and, in the following table, the physical signs which reveal these different stages are arranged in the order in which they usually occur :—

PHYSICAL SIGNS OF TUBERCULAR INFLAMMATION.

Stage of Congestion.

| Respiration. | | Râles. | Voice. | Percussion. |
|---|---|--------|---------|------------------|
| Inspiration. | Expiration. | | | |
| Intensity and duration both diminished. | Intensity natural ; duration increased. | None. | Normal. | Slightly damped. |
| Both murmurs rather harsh and dry. | | | | |

Stage of Inflammation.

| Respiration. | Râles. | Voice. | Percussion. |
|---|---|--------------------|---------------------|
| Character of the murmurs the same as above. | Small crepitation occasionally audible. | Slightly resonant. | Dulness commencing. |

Stage of Induration and Atrophy.

| Respiration. | | Râles. | Voice. | Percussion. |
|--|--------------------|---|----------------|---------------------|
| Inspiration. | Expiration. | In some spots the same crepitation may still be audible; but it often happens that no adventitious sound accompanies the murmurs. | Bronchophonic. | Dull and resistant. |
| Shorter, but becoming louder than before. | Longer and louder. | | | |
| Both murmurs rough and metallic, with tubular character in the expiration. | | | | |

These three stages of scrofulous inflammation of the lung are all to which it is necessary to refer ; inasmuch as the succeeding ones—namely, suppuration, ulceration, and the formation of cavities—are connected with the more advanced periods of phthisis. My present purpose, however, is simply to consider the pathological conditions of its earlier stages, as independent of the presence of tubercle in very many instances ; and to endeavour to show that, even when present, they play but a secondary part, whether in the production of the general symptoms or physi-

cal signs afforded during the progress of pulmonary consumption ; while in many cases of the disease, especially as met with in the later periods of life, they are entirely wanting—at least, in the solid state.

The process of tubercular inflammation presents certain varieties in its physical signs, as indicated in the preceding table. In the two first stages this difference is not strongly marked, being one of degree. In the third, however, these signs are most distinctive, and (as in the case of bronchial and vesicular irritation) may all be ex-

plained by reference to the condition of the affected tissues.

When a portion of the pulmonary substance has been for a length of time the seat of augmented excitability or irritation, it tends (unless this irritation be removed) to depart still further from the healthy condition. Hitherto there has been a preternaturally active circulation existing in the part; but the continuance of this, gives rise to the following changes:—Its bloodvessels become more and more distended by the increased flow; their elasticity is diminished, and they become crowded with an unusual number of red corpuscles. Of these, some still move onward in the current of the circulation, while the majority remain stationary: at the same time the capillary vessels not only are distended, but elongated. Such are the changes which take place in a part hitherto the seat of an unresolved irritation, and, if we suppose this part to be the membrane lining the air-vesicles, the physical signs attributed above to that stage of scrofulous inflammation characterised by this condition are thoroughly explicable.

The parietes of the pulmonary air-cells are formed by a membrane, the nature of which is not satisfactorily ascertained: it is probable, however, that it partakes more of the serous than the mucous character, and is equally liable to be affected by the same exciting causes of irritation. As long as this latter condition exists, there is (as before stated) increased amount of blood, augmented rapidity in its flow, and a correspondingly increased functional activity. Should this last for any time, a change will soon take place in the membrane forming the parietes of the vesicles. The rapidity of the local circulation, hitherto greater than natural, is now much diminished; even below the natural standard. In some of the vessels the blood still moves, in others it stagnates; their elasticity has been destroyed by over-distension, from the crowd of red corpuscles blocking them up, and they become elongated and tortuous. Such a condition of the vesicular membrane must, it is evident, produce its effects chiefly upon the dimensions of the small cavities of which it forms the boundary. These cavities, or air-cells, are, therefore, not only diminished in size by the increased thickness and tumefaction of their walls,

but the freedom with which they admit the inspired air is also lessened by the obstruction which is thus presented to their ordinary dilatation, as well as by the pressure which is exercised outside of them by the distended plexus of capillaries of the intervesicular areolar tissue. This obstruction to the entrance of air, combined with the greatly diminished capacity of the cells, involves the admission of a less amount than natural; and hence, upon principles previously stated, the diminution in the length and loudness of the inspiratory murmur.

Upon these grounds, however, it might be supposed that a similar change should take place during expiration. This, however, is not the case: true, it still continues feeble; but this arises simply from the fact that no portion of the lung has, as yet, become a sufficiently good conductor of the murmurs (independent of their intrinsic weakness). Consequently, the expiratory murmur, while its intensity is scarcely above the natural standard, is much lengthened, owing to the diminished reactive power of the swollen vesicles. These, having lost much of their usual elasticity, contract upon their contents with less force and rapidity than they are wont to do when in health. The air having thus to find its way out of tissues presenting an obstacle to its exit, and the assistance afforded by the elasticity of the vesicles being diminished, the process of expiration and its accompanying murmur are necessarily much prolonged.

With such a condition of the vesicular tissues of the lung, any explanation relative to the harsh dry character, and sensation of difficult production which the murmurs now present, would be superfluous. But there is another physical sign, which, though not of an auscultatory nature, may be here, nevertheless, alluded to, since it is sometimes to be appreciated even at this early stage, and is, I think, liable to misinterpretation: I allude to a shade of dulness on percussion which I do not conceive, under these circumstances, to be owing to the presence of tubercles: it is too diffused, too slight in degree. Tubercle, when existing in sufficient quantity to produce dulness, affords a more marked and resistant character in the percussion-sound; and, when occurring in isolated spots, the diminution

of sound is rather the result of a congested condition of the surrounding tissue, which accompanies or precedes such deposition. That this is really the case may, I conceive, be inferred from the fact that we often find this slight diffused dulness to be removeable by means which remove congestion; while the more decided dulness of tubercular consolidation is totally uninfluenced by such measures.

So much, then, for the congestive stage of scrofulous inflammation of the lung; its general symptoms are those of incipient phthisis—in fact, it very frequently constitutes the early stage of the disease; but its physical signs are not necessarily the result of tubercular deposition. In the subsequent stage, however, this matter is usually formed; but, even at this juncture, I doubt whether it gives rise to all the physical signs so unequivocally laid down as indicating its existence in a solid state. These signs, it is almost needless to say, are attributed to the unsoftened tubercle, blocking up the cells, opposing the entrance of air, and thus imparting a hard rough character to the murmurs, an increase in their intensity, from the increased conducting power of the lung, and a dull percussion-sound, from the greater density of the subjacent tissues. Such, indeed, may be the signs of tubercular deposition, when it has become solid; but, with regard to its actual deposition in this form, I am inclined rather to adopt the opinions of Vogel, Carswell, and some of the Parisian pathologists, and to believe that tubercle, when first deposited, is in a fluid state. If such be the case, it is evident that this fluid condition can be but temporary. Were it, however, possible to hit upon the time at which the exudation took place into the air-cells and smaller tubes, I see no good reason for its not affording a sound resembling more or less those which occur when pus or ordinary lymph is effused in the same localities. My reasons for adopting such a view are, I confess, unsupported by any authority, being purely the result of personal experience, which is as follows:—

I have not unfrequently found (in what were, in all probability, cases of incipient phthisis) a combination of signs indicative of the congestive state of scrofulous inflammation—viz., feeble-

ness and shortness of inspiration, harsh prolonged expiration, with slight diffused dulness; and that, after the persistence of these signs for an indefinite period, there was heard a minute crepitation, limited to one small space. This has lasted for a variable time—sometimes for a few days, sometimes longer, at others barely thirty six hours: it has then disappeared, has again recurred in another place again to disappear. The character of this sound was such as to give the idea of air passing through a glutinous semi-fluid substance; and I am inclined to believe that this short-lived recurrent crepitus is produced by bubbles of air passing through the semi-fluid tubercular matter until it becomes solid: the sound then, of course, ceases, while a fresh exudation in a neighbouring locality may cause its repetition; the period of its duration depending, of course, upon the time which the fluid portions of the tubercle take to be absorbed.

Within the last few months I have met with four examples of this irregular wandering crepitation. Of one of these cases I possess notes, relating especially to the physical phenomena at various periods; and these bear upon the present question sufficiently to excuse the admission of its details in these pages.

In the early part of November last I was requested, by a physician in this town, to examine the chest of one of his patients—a girl of about 18 years of age, who had for some time been in a delicate state of health, and presented some general symptoms of incipient phthisis. When first submitted to a thorough physical examination, the only discoverable signs were some of those I have before mentioned as connected with pulmonary irritation: these signs were limited to the left supra and infraclavicular spaces, where I discovered an abrupt, rather harsh respiratory murmur, louder than natural, together with a greater increase in the duration and intensity of the expiratory murmur than could have been expected in one in whom it was otherwise scarcely audible: there was no appreciable bronchophony, no vocal vibration, no dulness on percussion. The patient had a severe hard cough, without expectoration; there was slight dyspnoea, and a very rapid small pulse which nothing could lower; plainly showing the tendency of the system to

sympathise with the local irritation. This condition of the left upper lobe continued unchanged for a couple of months, in spite of the means taken to repress it. A change then took place: the modifications of the respiratory murmurs which had been detected in the left lung were now audible in the right upper lobe, unaccompanied at the end of each inspiration with a single click of sibilant rhonchus. On the left side the murmurs had become feebler than hitherto, but decidedly harsh, irregular, and difficult of production; still no dulness, or other sign of tubercular consolidation. The above condition lasted but a short time, when on a subsequent examination there was heard in a spot, not exceeding the size of a half crown, a small crepitating râle; this was no where else audible, and appeared to occupy the latter half of the inspiratory murmur. It had not the character of the true pneumonic crepitus, inasmuch as though evidently, from its size, formed in the terminal vesicles and smaller tubes, the bubbles were not evolved in such numbers or with such rapidity as this latter râle, while it had not the peculiar sharp dry character of what is designated the crackling rhonchus of Fournet. In a few days this sound had disappeared, and seemed to have shifted its locality. I now heard it in the axillary angle; it lasted here also but a short time, and at a subsequent examination the left upper lobe afforded evident indications of commencing solidification, for on the 21st of February I find the following notes of a physical examination to stand thus. Left side: Inspiration short, abrupt, saccadée, slightly bronchial; no râle whatsoever, but decided comparative dulness as low as the third rib; the expiration being at the same time rough, hard, prolonged, and having still more of the bronchial character than the inspiration. There was, also, slight resonance of the voice. The same signs were appreciable in the supra-spinous region, but in a lower degree. On the right side percussion was still normal beneath the clavicles; there were still the same indications of pulmonary irritation, which, without having increased in intensity, had invaded a larger portion of the upper lobe, while the same click had become more extensively audible. In the supra-spinous fossa nothing abnormal could be discovered.

At this period of the case the results of eight months' persevering treatment became at length apparent in the gradual abatement of the signs of irritation in the right lung; while, in the left, the partially consolidated tissues remained in a dormant condition, and at the last examination that was made no moist sounds whatever were audible, but simply the signs resulting from this consolidation.

I have stated this case at length, not from its being a solitary one, but that having met with some similar instances previously, I had determined, if another opportunity should occur, to watch and examine minutely and at short intervals the physical changes taking place in the lung, with a view of satisfying myself as to the possibility of the fluid deposition of tubercle being ever discoverable by a râle lasting for a short period. I may, indeed, have been mistaken in the interpretation I have here attached to this recurring crepitation. But I cannot see any reason for supposing that the various other fluids effused into the air cells and tubes should cause such a sound; while another substance, which we have equally reason to believe is also fluid when first deposited, should not do so likewise.

The third stage of scrofulous inflammation is one, the signs of which are constantly met with in earlier periods of phthisical affections; but, as a general rule, they appear almost invariably to be attributed to the agglomeration of a large number of tubercles. Now, it has been my lot to witness (more especially in the Parisian Hospitals) cases, which, on dissection, satisfied me that such was, in many instances, a wrong interpretation relative to the physical signs discovered during life, and which, instead of being directly attributable to tubercular consolidation, were rather the result of that stage of scrofulous inflammation of the parenchyma which tends to produce induration of the affected tissues. The patients had died at an early period of the disease, generally from uncontrollable diarrhœa, the result of scrofulous intestinal inflammation: during life they presented general symptoms of incipient phthisis, and after death the upper lobe of one or both lungs was found in the following condition. It appeared at first sight to have been atrophied; this was particularly the case where false membranes

existed round its summit. In substance it was harder than natural, and was torn with some difficulty. The vesicular tissue was more or less obliterated, the tubes still open. Its colour varied in different instances, and in different portions of the same lung. In some parts, where apparently the morbid process was less advanced, it was of a dusky reddish hue, in others of a brown or ash colour, while those portions which were most indurated, were of a mottled grey or dirty yellow. In some cases the hardened tissues appeared almost black from the presence of melanotic matter. On cutting into such lungs the same appearances were visible, and the finger rubbed over the cut surface experienced a granular sensation. In some the bronchial tubes contained a thin liquid pus; in others nothing but an increased redness of the mucous membrane was visible; while, in the outskirts of the disorganized portions, the tissues appeared to be in an earlier stage of inflammation. Now all the above changes, it may be said, were the result of chronic pneumonia, and so they, indeed, were; but the patients had presented strong indications of the tubercular diathesis, and in addition to these morbid appearances, there were found among the diseased parts tubercles scattered here and there. Some of these were in the miliary condition, others had assumed the form of crude yellow tubercle. But were they in sufficient numbers to account for the physical signs present before death? By no means: had the surrounding tissues been in as healthy a condition as they not unfrequently are (round even a larger amount of tubercular deposition), the modifications of the respiratory murmurs produced by their presence would have been neutralized by the quantity of healthy intervening pulmonary substance. I confess that, at the time, prejudiced in favour of the non-inflammatory origin of tubercle, from a previous attendance in the wards and on the lectures of the celebrated Louis, I had anticipated the discovery of a large agglomeration of tubercular matter, in order to explain the physical signs, which were those I have classed under the head of Induration, or the third stage of scrofulous inflammation of the lung. The amount of such matter actually present was inadequate to produce these signs, but the chronic

inflammatory induration in which they were imbedded was sufficient to explain the mechanism of their production, and at the same time to throw some doubt upon the opinion which assigned to the presence of tubercle so large a share in the production of the physical phenomena of early phthisis.

It can scarcely be necessary to enter into any explanation as to the mechanism of production of these signs, which characterise the consolidation arising from scrofulous inflammation of the lung; the conditions giving rise to the difference in the relative length of the two murmurs, being essentially the same as in the earlier stages, but increased in degree, while the change in their intensity becomes explicable by the increased conducting power of the condensed lung; the occurrence of tubular breathing in certain spots simply indicating the obliteration of the vesicular tissue to which the tubes lead, while the harsh dry character of the vesicular murmur (when audible) may be attributed to the hardened and thickened parietes of the air cells. The same conditions of the lung explain the modifications of the voice and percussion sounds, on which it is needless to dwell, as familiar to all.

Before quitting the subject of scrofulous induration of the lung, there is one remark more to be made connected with its differential diagnosis. It has been previously stated, that in certain constitutions tubercles may be deposited as the result of a very trifling amount of local excitation. In such cases there is not unfrequently, it is true, found strong evidence of consolidation of one or other of the upper lobes, if not both,—physical evidence, indeed, so strong as to elicit surprise at the want of symptomatic phenomena to account for such a condition. Now in these cases I believe the tubercle lies dormant; the process from which its deposition resulted has been resolved, and consequently the system no longer sympathizes with that, which is not in itself a source of irritation when once its exciting cause has been removed. If persons so circumstanced happen (as they not unfrequently do) to die of some other disease, the autopsy might report, as it often has done,—“tubercles were found in considerable quantity in the upper lobe, without any trace of inflammation, and of

which no symptoms (not signs) were afforded during life-time." In these cases the absence of irritation or inflammation causes a corresponding absence of symptoms, tending to draw attention to the lungs. If, on the other hand, we find an individual of scrofulous habit or parentage labouring under hectic fever, emaciation, night sweats, cough, and accelerated pulse, dyspnœa, and find on examination that the upper lobes present distinct evidence of increased density, we may be pretty well satisfied that while the probability is in favour of the presence of tubercle, the real cause of the morbid signs and symptoms is the local irritation with which the system is sympathizing, and the induration in which the tubercles have been deposited.

There yet remains one more auscultatory sign pertaining to the early stage of phthisis requiring notice, inasmuch as its coincidence with or without the evidences of increased density of the lung, gives it a different interpretation, and, indeed, in some cases, a different prognosis, although, for the most part, it is of very unfavourable import. I allude to the sub-crepitant rhonchus, which is more particularly alleged to indicate bronchitis of the small tubes; and no one will deny that its occurrence in the base of one or both lungs posteriorly is a valuable sign of the disease. But this rhonchus is not the same in all cases; and in the summit of the lung two forms may be often distinguished during the incipient stage of phthisis.

The first variety of the sub-crepitant rhonchus consists in the evolution of distinct bubbles, giving rise to a number of irregular moist crackling sounds, succeeding each other more slowly than in the second variety, occurring particularly towards the end of inspiration, but being continuous, more or less, with the expiration.

The second form of the subcrepitant rhonchus is more analogous to the true crepitation of ordinary pneumonia, both in the diminished size of the bubbles, and their less liquid character. In number they exceed those of the former variety, and, like the crepitant râle itself, they are almost exclusively audible during inspiration.

Now, with regard to this latter sound, I believe it to be the result of that scrofulous form of pulmonary inflammation previously mentioned; and its general

occurrence, in my experience, with diminished percussion-sound and increased resonance of the voice, tends to confirm this opinion. But the first variety of subcrepitant rhonchus is liable to two interpretations.

There is, we know, a stage in the progress of pulmonary consumption when the tubercular matter tends to liquify,—whether by an internal or external process is of but little moment. One thing, however, is certain,—that the presence of the now softened and liquid tubercle produces a moist râle, first described by M. Fournet under the name of humid crackling rhonchus, and considered by him to be direct evidence of the softening of tubercular matter. I confess I have had this sound pointed out to me in the wards where it was first discovered; but, from its unassisted evidence, I have been unable to understand why it should be more connected with such a process than the first variety of subcrepitant râle when limited to the apex of a lung. Both consist of a limited number of bubbling sounds of very similar quality; both are most distinct during inspiration, though likewise audible in expiration; and they both give the idea of bubbles breaking at the summit of a fluid in tubes of similar calibre. The fact, then, that a subcrepitant râle in the apex of the lung merely indicates a suspicious character of bronchitis, and the humid crackling râle, a decided softening of tubercle, appears to be an untenable distinction. The two sounds resemble each other closely, and may be constantly mistaken the one for the other; the so-called humid crackling being nothing but a subcrepitant râle more metallic in quality, and rather sharper in tone than usual.

There is, however, one point which may lead to the solution of the question as to the probable nature of the sound—namely, its consideration with reference to time, and its coexistence or not with dulness and resistance upon percussion. A râle of this kind (even if it should be the humid crackling), if heard at a period when the general symptoms indicate a recent invasion of the disease, though limited to the apex of the lung, if unaccompanied by dulness, may, however suspicious its locality, be set down as the result of bronchial inflammation,—probably, indeed, of a scrofulous na-

ture. Let it, on the other hand, occur subsequent to the manifestation of decided dulness, and one or other of the following conditions may be presumed to exist:—either an inflammatory induration of the parenchyma, complicated with a minor degree of scrofulous bronchitis without tubercle, or a similar condition of the parenchyma giving rise to a deposition of this matter in the air-cells and smaller tubes. It is of little consequence whether scrofulous pus, healthy pus, or true liquid tubercle, be the fluid through which the bubbles pass; if the locality be the same, the same sound, a subcrepitant râle will be the result.

Such, then, are the conditions of the lung constituting the early phases of pulmonary consumption. I have confined myself almost exclusively to the results of auscultation in detecting them, and am fully aware that some points have not been as fully dwelt upon as they perhaps deserved,—more especially in the latter part. My object, however, has been merely to inquire into the propriety of attributing so large a share in the production of the physical signs of incipient phthisis to the actual presence of tubercle, and whether there be not a condition of the pulmonary tissues preceding or accompanying its deposition, equally capable of affording evidence of its existence by a reference to the altered dynamic condition of the lung.

Cheltenham, April 21, 1851.

THE HARVEIAN ORATION AT THE ROYAL COLLEGE OF PHYSICIANS.

THIS annual oration was delivered on Saturday afternoon last by Dr. Spurgin.

At 4 o'clock, Dr. Spurgin, preceded by the mace-bearer, ascended the rostrum, and the President of the College (Dr. J. Ayrton Paris), Dr. Hawkins, registrar, and other members of the institution, having taken their seats, proceeded to deliver the oration, which was listened to with great attention, and of which the following is a summary. After a few introductory sentences the orator remarked upon the delight attending the discovery of truth, as well as the mode in which it should be investigated, and pointed out the superiority of the analytic over the synthetic method of discovery. This was forcibly illustrated by the great discovery of the circulation of the

blood by the immortal Harvey. He next adverted to the paramount importance of the blood in relation both to health and disease, and showed that in it was contained the means by which life was preserved and perpetuated, and that the very origin and well-being of the whole body depended upon that marvellous agent. A very high tribute was paid to the memory and character of Harvey, in honour of whom the oration was instituted. In complete harmony with Harvey's discovery, Dr. Spurgin propounded a new view of the supply of blood to the muscular fibre of the heart. He argued that that supply could not be derived from the coronary arteries, as is universally taught; but that it flowed through certain foramina in the cavities of the heart itself, to which all the coronary vessels stood in the relation of veins. In confirmation of this view he pointed out a peculiarity in the structure of the coronary arteries, and referred to medical history, which afforded an instance of a total obliteration of the passage through those arteries without causing a cessation of life. He next offered some interesting remarks on the existence of a "vis formatrix" pervading the whole animal world, but differing in each individual species; to which he invited the attention of all those who were interested in the advancement of sound physiology. He drew attention to the extensive and varied knowledge essentially necessary to all who practised the healing art, and the high moral tone which should always accompany both its acquisition and exercise. The members of the College who had died during the past year were feelingly alluded to, and a well-merited eulogium pronounced upon the late Dr. Haviland, Regius Professor of Physic in the University of Cambridge. In the peroration some striking observations were made upon the present remarkable era in the world's history, and in the discoveries of science: among the latter were mentioned Professor Faraday's discovery relative to the action of the magnet upon oxygen, and M. Foucault's demonstration, even to visual perception, of the rotation of the earth upon its axis. In conclusion, he alluded to the Crystal Palace and its peculiarities of construction, and described the vast object associated with this Great Exhibition, and the incalculable influence it might exercise upon the future well-being of the human race. He finished by a graceful compliment to the Queen as our beneficent ruler, and to Prince Albert as the promoter of this great national work.

MEDICAL GAZETTE.

FRIDAY, JULY 11, 1851.

THE question respecting the supply of Water to the Metropolis presents itself at the present time under a very curious aspect. It is well known that the Board of Health recommended the abandonment of the waters of the Thames, Lee, and New River, in consequence of the *excessive* hardness and of an *excess* of organic impurities contained in them. But it is satisfactory to find that without an immediate reference to chemists and microscopists, there is a *hard* as well as a *soft* water interest, and both have their advocates. Thus while the BOARD OF HEALTH and the HON. W. NAPIER look to softness as the essential quality of good and wholesome water, the London and Watford Spring-water Company propose to introduce into the Metropolis a water still harder than that which is at present supplied. Strangely enough, too, the Government Commissioners appointed to investigate the qualities of *all* the waters supplied and proposed to be supplied to London, throw aside the Surrey sands and softness for the Watford Chalk-water, which they represent as being four degrees harder than any of the River-waters now supplied to London! The Government report has tended greatly to disabuse the minds of the public regarding the properties of hard water. The Board of Health drew no distinction between the temporary and permanent causes of hardness in water. The difference has been placed in a proper light by the Government Commissioners; and hence they have been induced to recommend a water, which, although much harder than that of the Thames, is, like it, rendered softer by boiling. Entire freedom from lime is

not necessary to render a water wholesome and proper for a town population. There are undoubtedly very hard calcareous waters; but the metropolitan river waters are not of this class. The water supplied to Rome by the enormous aqueducts which stretch from the Apennines across the Campagna, is remarkably hard, and holds dissolved a large proportion of carbonate of lime. Although this water is highly prized, and has been consumed for ages by the Romans, yet its excess of hardness would have long ago led to its condemnation and abandonment by the English Board of Health!

Another sanitary bugbear which has been brought forward for strengthening the panic against hard water, is the alleged frequency of calculous and other urinary disorders in hard-water-districts. The mere suggestion that the chalk or plaster of Paris contained in hard water may find its way by some mysterious process from the stomach to the bladder, and appear in the shape of a calculus in the latter organ, has had, we believe, a considerable influence in creating a prejudice against the use of hard water. Credulous persons have not stopped to inquire whether cases of calculus are more frequent in the London population than among the inhabitants of soft water districts. They have believed the statement at once, just as they have believed that in every drop of Thames water they swallow as many microscopic monsters as are delineated in one of Dr. A. H. HASSALL'S coloured plates, or exhibited on the screen of the Polytechnic Institution by PROFESSOR BACKHOFFNER. We have no other interest in this matter than to endeavour to arrive at the truth in a medical point of view, and not to allow the public to remain under a gross delusion respecting the influence of water on health. A return of the calculous cases admitted into the Hospitals of London would, we

believe, show that the greater number were not inhabitants of the metropolis, and that the drinking of the waters of the Thames, Lee, and New River, had no influence whatever in producing the disease. Further, there is no reason to believe that chalk is transmitted bodily from the stomach to the bladder:—it is well known that chalk calculi are comparatively rare, and plaster of Paris never met with,—that the chemical constituents of one of the common forms of calculus, —*e. g.*, bone earth, or phosphate of lime, are abundant in *bread*, and that if any such risk existed as that supposed by the Board of Health of the direct transference of calcareous salts from the stomach to the bladder, it would be much more reasonable to advise the entire abandonment of the use of bread, than to suggest the discontinuance of the use of water containing only about twelve or fifteen grains of chalk to the gallon! Such rank absurdity meets, of course, with its refutation everywhere. It is well known that one of the most common varieties of calculi is the uric or lithic acid, an organic animal compound. According to the table of Dr. Scharling, out of 155 calculi, 94, or about 60 per cent., consist principally of uric acid, and according to another table, published by Mr. Crosse of Norwich, who practised in a calcareous or hard water district, out of 100 calculi voided through the urethra, 72 consisted of uric acid and urate of ammonia. There was only *one* of carbonate of lime. Why do we refer to facts so well known to medical practitioners? It is because, on the authority of Dr. Prout, the use of such water as that of the Thames has been represented as giving rise to calculous disease; and questions on the subject have been seriously propounded to the scientific witnesses recently examined before the Parliamentary Committee.

On reference to the last edition of Dr. Prout's excellent work on Renal Diseases, we find nothing to justify the allegation made upon his authority, while there is much that is adverse to it. At one of the sittings of the Committee last week, MR. BRANDE was cross-examined in reference to the production of calculous disease by the use of hard (or Thames) water. He very properly expressed his entire disbelief in this hypothesis. It is not improbable that those who support the Board of Health view will endeavour to prove that calcareous water has a tendency to produce uric acid calculus! This is the only plan now open to them for maintaining this groundless prejudice against the use of Thames water.

The evidence given by MR. BRANDE before the Committee is of importance in another point of view. Dr. Clark, who advocates the supply of the metropolis from the Thames, Lee, and New River, in preference to any other Water-scheme, thinks that the hardness may be, in great part, removed by the use of a certain proportion of lime. The Government Commissioners strongly report in favour of this chemical mode of softening water: they look upon it as efficient, and even practicable on a great scale. They therefore think that “prepared” or *doctored* water, in the small amount of *fifty millions of gallons* a day, might be furnished to the metropolis! This recommendation appears to arise from the agitation raised by the Board of Health on the subject of *softness*. The Commissioners find that by the use of lime, which is applicable in all seasons, “the softening operation” may be so carried out as even to satisfy the HON. W. NAPIER, and the other gentlemen who still have their eyes on the Bagshot sands; for they estimate that Thames water, or chalk water, might, in the end, be reduced from fourteen to only three degrees of hardness. It is recommended,

however, that this calcareous cooking should not go below five or six degrees in the first instance; for the taste and habits of metropolitan consumers might not be at once accommodated to so soft a water as that which the Board of Health wish to force upon them, and the liming process might produce. On this point we are inclined to adopt the view of our contemporary the *TIMES*. “It does certainly appear rather desirable that water should owe as much to nature and *as little to art* as possible, and we should look with some suspicions, we confess, on the ‘preparation’ of *fifty millions* of gallons daily, at an expense of £18,000 a year.”* Knowing what we do of the process, we should look not merely with suspicion but consternation at the idea of precipitating by lime all the chalk contained in a mass of water *a mile square, and ninety feet deep*,—the daily supply of London. There will be required the complete admixture of lime, subsidence of the carbonate of lime thereby formed, and filtration of fifty millions of gallons a day! Is it possible or probable that such a process could be carried out so as to supply clear water in the quantity daily required for London? Some districts must surely incur the risk of having the water supplied in a milky state, or of receiving an overdose of chalk or lime. The more fortunate portion of the community who happened to receive it clear, and in a properly “prepared” condition, would find it deprived of every trace of carbonic acid gas, the gas which chiefly confers on spring water its briskness and aeration. In reference to this proposition of supplying “prepared” water on such a gigantic scale, Mr. BRANDE, who must be taken to be a good authority on such matters, said that “he did not consider it desirable that water should undergo any

chemical process to reduce its hardness;” an opinion in which all who have experimented on this subject will, we think, concur.

We agree with the *TIMES* that there are two questions respecting the water supply of London, which should be kept distinct. The first comprises the *best mode* of supplying the metropolis; the second the *best source* from which such water should be taken. These questions have been completely mixed up by most of those who have entered upon the discussion of them. The *Times* considers the first of these questions,—*i. e.*, the mode of supply, to be the more important. In a medical and sanitary point of view, we must dissent from this opinion. It has been the policy of those who are now interested in changing the mode of supply, to attack the present sources, and to condemn them as impure and unfit for dietetic or domestic use, from the most exaggerated and incorrect statements of the qualities of the water. Even persons who from a certain professional status ought to know better, have treated the question affecting the qualities of Thames water as one not of scientific accuracy, but of common sense! Mr. BRANDE states in his evidence, and his opinion is confirmed by the Report of the Government Commissioners and the analyses of all chemists of repute who have examined the subject, that the Thames water taken from above Hammersmith is excellent and unexceptionable. If we are to take the ignorant and prejudiced views of those who abandon the balance, the crucible, and the test-tube, for what they miscall common sense, we are to infer that Mr. Brande, and every other chemist, is labouring under a mistake, and that the organic matter thrown into the Thames by the Fleet ditch or the Temple sewer is supplied to the public unchanged by the West Middlesex and Grand Junction Companies. Scientific re-

* *Times*, Friday, June 27.

search shows that this is an incorrect view, and however desirable it may be to avoid as much as possible the contamination of Thames water, all the analyses yet made show that, in the spots whence it is taken by the above-named companies, it is *not* "saturated and reeking with organic impurities."

We hold that in the supply of a great city like London, we must first look to the *best source*, considering the enormous *quantity* which is daily required for the wants of the population. It will not be prudent in any Government to supply half the population with a better water than that now supplied, if one of the probable results of the change is to cause the other half to go without any water at all. We are aware that every new-fangled scheme has its engineer who deposes to a daily supply of many more millions of gallons than London would ever be likely to require, but the figures are on paper, and the water either in invisible beds below the earth, or existing as vapour in the air to descend in regular monthly quantities on the Surrey sands or other Laputan gathering grounds. Under the present system we can point to the boundless quantity furnished by the Thames and the Lee.* This is no matter of speculation, but of demonstrable certainty. The evidence, as far as it goes, shows that the River water may be supplied in an excellent and unexceptionable condition; we take all the pains in the world to spoil it by collecting it in dirty cisterns or water butts, by making it the receptacle of filth, by exposing it uncovered to air, light, and a hot sun, by placing it in the vicinity of a dust-bin or a privy, and then complain of the *source*, when we should really blame our own

negligent and filthy habits.* But whatever objection may exist to the source, *quantity* must not be disregarded, and further this quantity must not rest on the speculative calculations of interested parties. From the evidence yet adduced, it appears certain that there can be no economical substitute for the waters of the Thames and the Lee.

As to the best mode of supply, we dissent *toto cælo* from the proposition that the squabbling vestries of the London parishes should be converted into Water Companies. They might as reasonably be selected to supply tea, coffee, or coals, to the inhabitants of their respective districts. What guarantee could such a system present against grosser abuses than are now alleged to exist? The rates would be at the option of the vestrymen, and the parishioners would be left at the mercy of a clique of ignorant and jobbing shopkeepers, who would be authorised by law to spend the parochial money in carrying out fruitless schemes. As to the *quality* of the water, judging by the repute which the parochial pumps now enjoy, it would not surprise us, if, when endowed with this power, the vestries proposed to bore the blue clay of London at the expense of the parishioners, and supply each householder with the hard gypseous water which is obtained from the shallow wells of the metropolis. By this transfer to vestry jurisdiction we should not only lose the chance of the *best source*, but we should have inflicted on us the *worst mode* of supply. Nevertheless, owing to a general election being not far distant, nearly all the metropolitan members are in favour of the parochial scheme.

* A foreigner lately remarked to us that he had observed at the fountains of the Crystal Palace some who emptied the washings of their glasses into the water; in a few minutes afterwards this water was collected in other glasses, and swallowed by another class of thirsty visitors!

* About one hundred and fifty millions of gallons are found to pass under Richmond Bridge, daily.

Reviews.

Nice et son Climat, avec des notices sur le littoral de la Méditerranée de Marseille à Gènes. Par EDWIN LEE, Membre du College Royal des Chirurgiens à Londres.

On the Climate of Nice and the neighbouring Shores of the Mediterranean 12mo. pp. 120. Paris: Baillière. 1851.

MR. LEE states that he has published this work in the French language, rather than in the English, that it may be useful to a larger number of readers: we trust the author may find his object gained, for we have herein a very interesting sketch of a delightful watering place, and an account of the attractions presented by the scenery and localities around. The author's remarks upon the choice of a residence for patients suffering under pulmonary affections, and upon the predisposing causes of phthisis, are deserving the attention of health-seekers. The secret, however, of the benefit derived from a visit to this or that place does not depend much upon tropical climatorial peculiarities, but upon the simple facts of change and relaxation. For a consumptive patient, the place in which he can most freely take exercise in the open air, and the most entirely enjoy a remission of the troubles and cares of business, is the spot where he will derive the greatest benefit.

We do not, however, totally disregard the benefits peculiar to different situations, because there are, undoubtedly, advantages in adapting the climate to some kinds of complaints. The climate of Nice, for instance, is, according to the author, well adapted to the amelioration of the symptoms of those maladies which originate from damp, want of pure air, or a deficiency in solar light, in diseases of debility generally, and in those characterised by irritability of the abdominal viscera.

The following table, reduced from one by the author, will enable our readers to form some opinion of the climatorial character of Nice:—

Mean temperature of the months at Nice and London.

| | Nice. | London. | |
|--------------|--------|---------|------|
| January . . | 48 F. | 34 F. | 36.1 |
| February . . | 50 . . | 38 . . | |
| March . . | 51 . . | 42 . . | 43.9 |
| April . . | 58 . . | 46 . . | 49.8 |
| May . . | 63 . . | 53 . . | 54 |
| June . . | 71 . . | 59 . . | |
| July . . | 76 . . | 61 . . | |
| August . . | 76 . . | 68 . . | 61.6 |
| September . | 71 . . | 56 . . | 57.8 |
| October . . | 63 . . | 49 . . | |
| November . | 57 . . | 40 . . | 42.9 |
| December . | 54 . . | 28 . . | 39.8 |
| Annual Mean. | 61 . . | 47 | |

In a third column we have made some corrections, by inserting the mean temperatures on which we are accustomed to base our weekly comparisons. The numbers have been derived from the records of Greenwich Observatory. Mr. Lee would make December much colder than January, which is contrary to observation. The mean temperature for August is too high.

Two places cannot, however, be compared in regard to salubrity merely by the relative degree of elevation or depression of the thermometer in each month. The effect of sudden and great changes has a more powerful influence on health than the extreme range of the thermometer.

We recommend all travellers to Nice, medical or non-medical, to provide themselves with this little manual.

ELECTION OF FELLOWS AT THE ROYAL COLLEGE OF SURGEONS.

A LARGE meeting of the fellows of the College assembled in their theatre on the 7th inst., for the purpose of electing from their own body four members of the council, when, at the close of the ballot, the President declared the election to have fallen on Mr. William Coulson, of Frederick's-place, Old Jewry, senior surgeon to St. Mary's Hospital; Mr. John Dalrymple, of Grosvenor-street, consulting surgeon to the Royal Ophthalmic Hospital. Messrs. John Bishop, of Bernard-street, Russell-square, and Cæsar Henry Hawkins, of Grosvenor-street, were re-elected members of the council.

Proceedings of Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

June 24, 1851.

MR. HODGSON, PRESIDENT, IN THE CHAIR.

On some Secondary Physiological Effects produced by Atmospheric Electricity. By Professor C. F. SCHÖNBEIN.

AFTER referring to the more obvious effects of electricity upon the organs of sensation, and more especially those of smell and taste, and stating his belief that the peculiar odour observed when an electrical discharge takes place, or in the neighbourhood of points from which electricity is passing, is not due to the electricity itself, but caused by the presence of a peculiar matter which he has named ozone, the author proceeds to lay before us the opinions held respecting it,—viz. that either pure or atmospheric oxygen, when exposed to the action of electricity, is transformed into this odoriferous body, which he was at first inclined to consider a peculiar peroxide of hydrogen, but which other eminent chemists believe to be merely an allotropic modification of oxygen. With reference to its exact composition he declines, however, to give a decided opinion. This body, whatever its actual nature may be, is a most powerful oxidizing agent, at ordinary temperatures oxidizing silver, forming iodic acid from silver, nitric acid from nitrogen, converting the acids ending in *ous* into those which end in *ic*, the salts which terminate in *ite* into those which end in *ate*, metallic sulphurets into sulphates. It decomposes the gaseous compounds of hydrogen with sulphur, selenium, phosphorus, iodine, arsenic, and antimony, and exerts many other energetic chemical actions, both on organic and inorganic substances. It has a strong electro-motive power similar to that of chlorine, bromine, and iodine; and lastly, it has certain physiological effects upon the animal system similar to those of chlorine and bromine, acting powerfully as a poison even in minute doses.

Ozone is being constantly generated in the atmosphere by the electrical action going on. When in excess, it has a sensible effect upon the mucous membranes of those exposed to its influence, and its presence is indicated by starch containing the iodide of potassium being turned blue. The author has availed himself of this fact

in the construction of his ozonometer, which consists of a box containing test paper thus prepared, and a chromatic scale. He believes that certain catarrhal affections are produced by the presence of ozone in the atmosphere, and he has availed himself of the assistance of medical friends in ascertaining the co-existence of unusual prevalence of catarrh with what he terms his *blue days*, and he suggests that more extended observations are desirable for this purpose.

The author then refers to the co-existence of poisonous miasmata in the atmosphere, which are generated by certain “purely chemical, or physical, or physiologically chemical actions” which take place within the earth or on its surface, in stagnant or running waters, or in the atmosphere itself. Of these poisonous gases or vapours there are three sorts, which are antagonistic to and destroy each other. Of the first class, sulphuretted, and perhaps phosphuretted, hydrogen, alone, are produced by natural causes, and these in such minute quantities that they do not, except in a few localities, exert any influence upon animal life. Of the second class, there is one—namely, ozone—which exists in appreciable quantities in the atmosphere. But the abundant source of gaseous matters is that which the decomposition of vegetable and animal substances affords. Some of these are well known, such as carbonic acid and ammonia; others are of unknown chemical nature, and, though the absolute quantity of such deleterious matters may be small, in comparison to the immense volume of the atmosphere, their accumulation would render the air unfit for the support of animal life, unless some agent were at work to neutralize or decompose them.

The author states that the purification of the atmosphere which we attempt to effect on a small scale by chlorine fumigations, is accomplished, in the great process of nature, by the agency of ozone, a task for which it is peculiarly fitted by its high oxidizing powers. He gives the details of some experiments upon air tainted by putrid flesh which was purified by ozone disengaged by the action of moistened phosphorus. Ozone, which is formed in the atmosphere by the electrical discharges constantly going on, acts upon and decomposes the oxidizable miasmatic gaseous matters which contaminate it, and thus the atmosphere is preserved in a state fit for the support of animal life; and, at the same time, the ozone, which, if allowed to accumulate, would become deleterious, is in its turn neutralized or decomposed by the miasmata.

During a thunder-storm large quantities

of ozone are formed; and the author supposes that the unhealthy state of the atmosphere which exists in the hot season of the year may be caused by the accumulation of miasmata produced by animal decomposition, and that it is by the generation of ozone that thunder-storms purify the air. The author considers that there are probably certain states of the atmosphere in which the quantity of ozone does not bear a due proportion to the miasmata it has to act upon, and that under such circumstances it is that certain diseases—cholera, for instance—make their appearance. He is also of opinion that in the winter there is more atmospheric ozone than in summer, and that the higher strata of the atmosphere contain more than the lower, and as the generation of some diseases—such as the yellow fever—appears to be connected with certain seasons and geographical positions, he thinks that, by an extended series of observations, it might be ascertained whether these diseases bear any relation to the ozoniferous state of that portion of the atmosphere where they happen to occur.

The paper concludes with a reference to experiments which prove that ozone produced by the action of electricity, or by the agency of phosphorus, is identical.

On a New Method of Treating certain Cases of Epiphora. By WILLIAM BOWMAN, F.R.S.

This paper describes a new mode of treatment of those cases of epiphora which depend on a displacement of the puncta lachrymalia out of the course of the tears, or on an obstruction of the canaliculi between the punctum and caruncle, the inner extremity of the canals, together with the lachrymal sac and nasal duct, remaining healthy.

The author describes the exact nature of these cases, and relates examples. The treatment which he has devised consists in slitting up the canal from the punctum on the conjunctival aspect, so as to carry backwards the orifice at which the tears are received on to the mucous membrane near the caruncle; and he finds that the tears are, in fact, taken up by the remaining portion of the canal, while the end towards the punctum is converted into a groove. For the cases of obstruction from injury or other cause he suggests a modification of this operation, by which the canal between the obstruction and the sac may be slit up for some way so as to receive the tears at a new opening.

The cases to which these new operations are applicable have been for the most part abandoned by surgeons as incurable.

Description of an Operation for the Radical Cure of Obstinate Stricture of the Urethra. By Dr. NEVERMANN, of Meeklenburgh. [Communicated by B. Phillips, F.R.S.]

The author states that, after having tried all methods of treating obstinate stricture, the operation with a trocar catheter appears to him the most rational.

The patient is placed as for lithotomy, and the catheter introduced as far as the seat of obstruction. The operator introduces one or two fingers into the rectum as a guide to the instrument: he then grasps the handle of the instrument, whose point is exposed, with the right hand, and pushes it steadily and forcibly forwards in the axis of the pelvis towards the bladder. When the resistance is found to cease, the trocar is drawn out, and the catheter is left in the canal. In four or six days it is replaced by an ordinary elastic catheter.

The paper is accompanied by drawings of the instruments, and a description of them.

Case of Obturator or Thyroidal Hernia successfully relieved by Operation. By HENRY OBRE, formerly Assistant-Surgeon to the St. Marylebone Infirmary. [Communicated by Professor Erichsen.]

After commenting on the extreme rarity of this form of hernia, and stating that he had been unable to find any record of its having been detected and relieved by operation during life, the author relates a case in which he operated successfully.

The patient, a female, aged 55, the mother of a large family, was seized with symptoms which led her medical attendant (Mr. Gardener) to believe that she was suffering from rupture. She denied that this was the case, and a careful examination convinced Mr. Gardener that there was no hernia in the usual situations of that disorder. A little below the femoral region, on the right side, however, he detected a degree of hardness resembling a small gland, and deeply seated, with some general fulness about the part.

The author saw this patient on the fourth day after the symptoms had begun. At this time she was suffering extreme abdominal pain in the umbilical region: during the previous twelve hours her vomiting had been stercoraceous and incessant; the countenance pale and contracted; voice faltering; pulse weak, small, and intermitting;—in short, all the symptoms of pending dissolution from strangulated intestine were present. On careful examination, nothing could be detected but a slight degree of fulness in Scarpa's triangle on the right side, that on the opposite side being well marked. On using firm pressure with

the ends of the fingers over the neighbourhood of the femoral artery, and a little below the saphenous opening, a distinct hardness was to be felt, slight in extent, but giving the impression as if the sheath of the vessels was being pressed on.

The state of the patient was such as to induce the author to propose to make an incision into the upper part of the thigh down to the hard structure, in the hope that he might find confined intestine low in the femoral canal. He made a straight incision into Scarpa's triangle, as in the operation for tying the common femoral artery, beginning about three inches below Poupart's ligament. When the cribriform fascia was opened, and the saphenous opening exposed, no hernial sac was found; but the hardened structure could be felt lying deep to the inside of this opening. The dissection was with some difficulty continued downwards; the fascia lata was divided, and the pectineus muscle exposed. The fibres of this muscle were divided transversely for about an inch and a half or two inches, and a hernial sac was exposed, which rose up into the wound to the size of a pigeon's egg. The finger being passed along the sac, entered the obturator opening. The sac was opened, and the intestine was found to be a portion of the small gut, blue and congested. The opening through which it passed did not tightly enclose its neck; but it was considered prudent slightly to divide the edge. In doing this, the saphena vein was wounded, and it was necessary to apply a ligature to its upper part. This was the only ligature required. After the operation no medicine was given. In the course of the day the bowels acted three times; and in the course of a few days the patient had quite recovered.

Some Observations on the Pathology of those Affections of the Ear which produce Disease in the Brain. By JOSEPH TOYNBEE, F.R.S., Fellow of the Royal College of Surgeons in England, Aural Surgeon to St. Mary's Hospital, and Consulting Surgeon to the St. George's and St. James's General Dispensary.

In this communication the author has a two-fold object:—the *first* is to point out the nature of the several affections of the ear which produce disease in the brain; the *second*, to show that each of the cavities of the ear has its particular division of the encephalon, to which it communicates disease: thus, that—

1. Affections of the external meatus and mastoid cells produce disease in the lateral sinus and cerebellum.

2. Affections of the tympanic cavity produce disease in the cerebrum.

3. Affections of the vestibule and cochlea produce disease in the medulla oblongata.

1. In speaking of the *external meatus*, its intimate relations with the lateral sinus and cerebellum are pointed out; the affection most frequently producing disease in these parts is shown to be catarrhal inflammation of its dermoid layer, one of the numerous diseases which have hitherto been classed together under the term *storrhæa*. This affection of the external meatus is fully described, and it is shewn that it is found to endure during many years without the presence of pain or any other symptom calculated to apprise the surgeon of the presence of a formidable disease, while the bone may be becoming slowly carious, and the dura mater and cerebellum disorganized.

In the *second* division of the paper, the tympanic cavity is described to be the part of the ear from which disease is most frequently propagated to the brain. This circumstance is accounted for, *firstly*, by the great liability of the mucous membrane of the tympanum to undergo pathological changes; and *secondly*, by the existence of very intimate relations between this membrane and the dura mater. The affection of the tympanum which most frequently produces disease in the cerebrum, is chronic catarrhal inflammation of the mucous membrane, an affection thus far only known as a *otorrhæa*. The four changes in the dura mater and cerebrum produced by the affections of the tympanum, are—

1. Inflammation of the dura mater and its separation from the surface of the petrous bone by serum.

2. Ulceration of the dura mater and its complete detachment of the petrous bone.

3. An abscess in the substance of the cerebrum.

4. Undefined suppuration of the substance of the cerebrum.

From a careful examination of cases, it appears that chronic catarrhal inflammation of the mucous membrane of the tympanum may exist as many as twenty or more years, without the production of any disease beyond it, or, at least, without the existence of symptoms by means of which the presence of such disease can be diagnosed; nevertheless, in the great majority of cases, vital structures become sensibly affected, in a much shorter period.

The *third* section of the paper is devoted to the consideration of the labyrinth; and it is shewn, that purulent matter in the vestibule, or cochlea, sometimes causes disease of the auditory nerve, which is transmitted to the medulla oblongata, producing suppurative inflammation of the meninges,

and death, without the presence of any caries of the bone.

In the course of this paper, the author shows the necessity of abolishing the use of the term *otorrhœa*, and of using in its place the names of the several diseases, eight in number, of which a discharge from the ear is one of the symptoms. In conclusion, the facts which he is desirous of impressing upon the minds of medical men, are, that the bone, *dura mater*, and substance of the brain, may be slowly undergoing disorganization, without the presence of any other symptoms calculated to reveal to the medical man the existence of formidable disease, than the presence of a discharge from the external auditory meatus, and that consequently no person suffering from catarrhal inflammation of the dermoid layer of the meatus, the *membrana tympani*, or of the mucous membrane of the tympanum, can be assured that disease is not being prolonged to the temporal bone, the brain and its membranes; and that any ordinary exciting cause—as an attack of fever or influenza, a blow on the head, &c.—may not induce the appearance of acute symptoms, which, as a general rule, are speedily fatal.

Appended to the paper are tables giving the particulars of sixty-five cases of disease extending from the ear to the brain; in which tables, the duration of the chronic and acute symptoms, and the post-mortem appearances, are concisely detailed.

A Case of Obstruction of the Colon relieved by an Operation performed at the Groin.

By JAMES LUKE, Senior Surgeon to the London and St. Luke's Hospitals, &c.
Communicated by JAMES MONCRIEFF ARNOTT.

The subject of this report was a man aged 60, who, on the 16th Dec., 1850, first complained to the author of feeling generally unwell. He had no pain, but his countenance was depressed, his eyes sallow, and his tongue coated. The bowels were confined, and latterly medicines had acted with difficulty on them. An aperient was ordered, and on the following day he passed a small lumpy motion, but without relief to the symptoms. Castor oil was ordered, but after a time was rejected by vomiting. On the 18th there was no relief from the bowels, and he vomited everything he took. From this time he progressively got worse, in spite of all the means resorted to for his relief. He complained of pain chiefly about the region of the cœcum. The transverse arch of the colon could be felt distended and tympanitic. A careful observation of the case had led the author to believe that there was obstruction in the bowel about the sigmoid flexure of the colon, and it was

resolved, as a last resource, to operate upon the patient. The operation was performed on the 23d. Not thinking it prudent to assume that the conclusion respecting the seat of the obstruction was certainly correct, the author determined to adopt that operation which would give him some opportunity of extending his search, provided he did not find the obstruction at the point where it was supposed to be. He, therefore, opened the abdominal parietes near the groin, by an incision four inches in length, a little to the outside of the course of the epigastric artery, the lower extremity of which incision terminated a little above Poupart's ligament. The peritoneum was opened to the extent of about two inches. On passing the finger down the surface of the intestine, which now protruded, a diseased mass could be felt, which appeared to encircle the intestine. The bowel was then opened above this part, a large quantity of feculent matter came away, and the patient expressed himself as relieved. On now passing the finger into the bowel it was found to be impervious about two inches below the aperture.

After the operation the recovery of the patient was rapid. On the second day feces passed per anum, and continued to do so for more than a month, when their passage through the natural opening ceased: it was again partially restored, but from this time the greater part of the feces passed by the wound. It is closed by a well fitted pad, and he has been enabled since to pursue his ordinary occupation almost without interruption.

The author then proceeded to remark on the danger of protracted delay in attempting to relieve such cases, a delay which is, however, to a great extent, rendered necessary by the difficulties of diagnosis. The distension of the colon, and the evidence afforded by the proper introduction of the long tube, are pointed out as the two means of diagnosis on which reliance may be generally placed for the purpose of determining the seat of obstruction when it is situated at the lower part of the colon.

The advantages of the operations of Amussat and Littre are then compared, and the author, while admitting the advantage gained by operating in the loins, as proposed by the former, of not opening the peritoneal cavity, yet thinks that the operation in the loin offers certain advantages which render it in many cases preferable. By the operation in the loins nothing more could be done than opening the intestine, but this might in some cases be improper, as where obstructions were produced by fibrous bands overlying the intestine, or by strangulations the result of causes acting exteriorly to its tunics. In these

cases the proper treatment is to divide the bands or relieve the cause of strangulation. In the event, too, of an error of diagnosis, the opening in the loins does not provide any facilities for correcting the error. The danger of total failure of affording relief consequent upon this state of things, must therefore be attributable as a demerit to the operation in the loins.

There are, besides the minor evils in this operation, that the opening cannot be conveniently attended to by the patient himself, and that there exists frequently a great disposition to contraction, arising from the great depth of the wound, which requires renewed surgical interference.

In all these particulars, with the exception of the necessary attendant of peritoneal section, the operation of opening the abdominal parietes at the groin, in all cases of obstruction or suspected obstruction in the lower part of the colon, appears to the author to be the operation which should be preferred. It affords facilities for modifying the treatment, either by opening the intestine when incapable of relief by other means, or by dividing or removing any existing cause of strangulation. It enables the surgeon to extend his search within a limited range, in the event of the diagnosis proving incorrect; it allows him to open the bowel as close as possible to the seat of obstruction; and it secures to the patient the facilities for attending to his own comfort, which appear almost a necessary condition to make life endurable under such circumstances.

Variations of the Sulphates and Phosphates excreted in Acute Chorea, Delirium Tremens, and Inflammation of the Brain. By H. BENICE JONES.

Having determined the variations of the sulphates in the state of health, when different diets, amount of exercise, and medicines were taken, the variations of the sulphates in disease were examined. At the same time, the total amount of alkaline and earthy phosphates was determined, partly in order to see whether the amount of sulphates and of phosphates bore any relation to one another, and partly to test the conclusions which were drawn in the author's previous paper "On the Variations of the Phosphates in Disease."

The cases were thus classified:—

1st. Acute and chronic diseases, in which the muscular structures were chiefly affected, as chorea.

2d. Functional diseases of the brain, as delirium tremens.

3d. Acute inflammatory diseases of the nervous structures, as inflammation of the brain.

4th. Chronic diseases of the nervous structures.

5th. Acute diseases, in which neither the nervous nor the muscular structures were chiefly affected.

6th. Chronic diseases in which neither the muscular nor the nervous structures were chiefly affected.

The three last classes gave only negative results.

In illustration of the first class, three cases of most intense chorea are detailed. The urine was examined frequently from the third to the eleventh day. The phosphates were found to be diminished; the sulphates were present in very great excess. The urine was found to be so loaded with urea that nitrate of urea crystallised out before the urine was concentrated. The specific gravity of the urine was as high as 1036 in one case, 1035 in another, and in the third 1031.

In illustration of the second class three cases of delirium tremens are given. The urine was examined from the fifth to the fourteenth day of the disease. The phosphates were not found to be so remarkably diminished as in the cases reported in the previous paper. The sulphates were found to be exceedingly increased. The amount of urea was so great that nitric acid caused an instantaneous crystallization. The specific gravity was, in one case, 1041; in another, 1037; and, in the third, 1027.

In other words, there was the most remarkable correspondence between the state of the urine in acute chorea, and in delirium tremens.

In illustration of the third class, four cases of acute inflammation of the brain are given. The urine was examined from the fourth to the twenty-sixth day. Though the inflammation in these cases was not of so intense a kind as in those which were recorded in the author's previous paper referred to, yet they confirm the statement that in inflammation of the brain the phosphates in the urine are increased; they also lead to the conclusion that the sulphates are at the same time increased in the same degree.

In conclusion, the author states the phenomenon common to acute chorea, and to intense delirium tremens, is increased and unceasing muscular action. The muscles are highly complex organic compounds, in which sulphur exists in an unoxidized state; and the muscular action is accompanied, if not caused, by an action of oxygen, which, among other results, gives rise to the formation of sulphuric acid and urea; the amount of oxidation being proportioned to the intensity of the muscular action. The result produced is an increase of the sulphates and of the urea in the urine, just as

in health they would be increased if continued strong exercise was taken. The increased amount of urea does not constitute a disease resembling diabetes, but it is only an evidence of the changes which are taking place within.

The increase of sulphates and phosphates of the brain is also an evidence of increased oxidation of the nervous structures. These simultaneous variations depend on the fact, that the amount of sulphur in the brain is nearly the same as the amount of phosphates.

Thus, at one time we have evidence of increased oxidation of the elements of the nervous structures, and, at another time, increased oxidation of the elements of the muscular structures, and we may thus arrive at the conclusion, that, at one time, the function of the nerves, and, at another, that of the muscles is inordinately increased.

The time occupied in reading the various papers allowed of no discussion.

This was the last meeting of the Society for the season.

ACADEMY OF MEDICINE, PARIS.

June 10, 1851.

Compression of the Aorta in Uterine Hæmorrhage.

M. VILLENEUVE read a report on a communication from Dr. Plouviez, of Lille, on this subject. The case was that of a young woman, twenty-three years of age, safely delivered of her third child; she had gone on well until the tenth day of her accouchement, when several attacks of hæmorrhage occurred, which were checked by plugging, cold affusion, &c. On the following day there took place another and more violent flooding, which threatened her life. M. Plouviez practised compression of the aorta at the sacro-vertebral junction, and the hæmorrhage instantly ceased. The compression was maintained for forty-five minutes, the other usual means being employed at the same time. Six days afterwards, another flooding occurred, and induced such extreme syncope that the patient was considered to be dead. When compression had been continued three-quarters of an hour, some signs of returning animation appeared, which, however, again quickly vanished, despite the entire cessation of hæmorrhage, the return of which was prevented by prolonging the compression for several hours. After patient perseverance with various means, life was restored, and the patient completely recovered.

Variations in Form; and Malformations of the Female Pelvis.

M. LENOIR, candidate for the vacant place in the obstetric section, read an essay in which he distinguished two categories of alterations of the pelvis—those which are in no way injurious, and those which obstruct delivery or the free use of the generative organs. Under these two categories the author established divisions according to the extent, direction, &c., of the alterations, and according to the period of their occurrence.

June 24, 1851.

Tannates of Quinine and Cinchonine.

M. BARRESWIL read an essay, in which he drew the attention of the Academy to the preparations of these tannates, which he stated to have greater powers than equal quantities of other preparations of the alkaloids, and to be devoid of bitterness. M. Barreswil stated that they are, moreover, suitable to those cases in which quinine is not borne by the constitution.

Nicotine.

M. ORFILA stated that, in the prosecution of his researches on this poison, he had endeavoured to ascertain whether its presence can be detected in the body long after death. With this view he had administered it to dogs, and suffered them to undergo putrefaction, and had then been able readily to detect the presence of nicotine.

SURGICAL SOCIETY OF PARIS.

June 11, 1851.

Double Fracture of the Humerus in an Old Woman.

M. LENOIR presented a pathological specimen taken from the body of a woman aged eighty-three; the patient having died three months after the accident. The nature or extent of the injury had remained doubtful. On examination of the body, a fracture of the anatomical neck of the humerus was found. The head of the bone had torn through the capsule, and was lodged in the subscapular fossa. A fracture of the surgical neck was nearly consolidated. The upper fragment was attached to the edge of the glenoid cavity by a portion of ligament. This cavity was nearly filled up by fibrous tissue.

MM. MAISONNEUVE and LARREY remarked upon the rarity of this kind of accident, and observed that its diagnosis is difficult.

Hospital and Infirmary Reports.

KING'S COLLEGE HOSPITAL.

Reported, with Remarks, by Mr. H. SMITH.

Cleft Palate.

ONE of the most striking features connected with the vast improvements which have been of late years made in surgery, consists in the circumstance that most of the important and useful practical deductions have been arrived at, not by chance or through mere experience, but after the strictest anatomical and physiological investigation, both by reasoning and by experiment. Animated by a true scientific fervour, those surgeons of the present age, who are working for the improvement of their profession, are not contented with the mere observation of facts, but they endeavour, as well, to find out their precise causes. And thus it is that error is discovered and strictly accounted for, and methods of practice which are based upon a sure rock are substituted for those which are not in accordance with scientific rules.

One of those procedures in surgery which has been founded upon accurate anatomical and physiological data, and which has been fully tested upon these grounds, is the improved operation for that unnatural condition of parts in the mouth termed cleft palate. Amongst the whole class of deformities of this nature, this was one which was found to be most difficult to remedy in an effectual manner. The most eminent surgeons have given their attention to it, but still, until of late years, no method of operating had been discovered, on which hope of any thing like general success could be placed. The reason of this was, that the actual condition and functions of the part in the cleft state had not been properly inquired into and accurately understood. This want of success—this surgical problem—was, however, solved in 1845 by Mr. Fergusson, who proved by a most elaborate dissection, and by an ingenious train of reasoning, that so long as certain muscles of the palate employed their functions, and exerted their action upon the soft parts, an effectual bar was placed to the union of the fissure, although the edges of it had been placed in most careful apposition, and the tension had been apparently taken off in the most careful manner.

It will hardly be necessary to state Mr.

Fergusson's views, as they are probably well known to most of the profession, and we have before alluded to them in a previous report from this hospital; but we may briefly mention, that he has found that the main obstacle to the union of the wound was the levator palati muscle, which acts powerfully in drawing upwards and aside the two flaps of the palate. The object the surgeon had in view, then, was to divide this muscle; and the doing so is the essential, or at least the most essential, feature of this operation. Other muscular fibres may be divided, if necessary, as those of the palato-pharyngeus; but a free division of the levator palati will generally paralyse the flaps, and they may be easily brought into, and retained in contact, until firm union has taken place. Mr. Fergusson has now had many opportunities of putting this operation into force. We have witnessed many of them in his and other surgeons' hands, and the success has been remarkable, even in cases which have been tried on the old plan, and when failure had occurred.

Notwithstanding the success of this operation, a surgeon of some authority, in a work on operative surgery lately published, doubts the accuracy of these views. Mr. Skey denies the action of the levator palati muscle on the flaps of the palate, and states his belief that it is to the tensor palati that the tension on the palate is mainly owing, and recommends a free division through the substance of the palate, on each side of the fissure, by which the tendon of this muscle as well as other parts are cut through. This plan was adopted by Dieffenbach; but the success of this measure is problematical. If any one will examine with care the structure, position, and functions of the two chief muscles of the palate, he will observe that the sphere of action of the tensor palati on the soft parts is very limited indeed, and that it is a tensor—at least to any extent—only in name; whilst the levator has a very free action, and forcibly lifts up the soft palate; and when this latter is separated into two flaps, as in the cleft condition, draws them away from each other. In order, therefore, to insure success in a bad case, it is necessary to divide this muscle on either side prior to bringing the edges of the wound together; but, if this be done, there is no need whatever of making incisions through the whole structure of the palate on either side of the cleft. The best possible proof of the correctness of these views is the great success which has attended these operations, and the fact that those surgeons who have put the plan in force have, without exception, spoken well of it,

and acknowledged its superiority over those of the older surgeons.

We have thought it right to make these remarks before relating an illustrative case which has lately been in the hospital, inasmuch as the subject is not so well understood as it should be, and the serious mistake which Mr. Skey has himself undoubtedly fallen into may very likely be the cause of others entertaining the same ideas respecting this operation.

A girl, *ætat.* 19, admitted into the hospital from Southampton in the early part of May, with a fissure extending through the centre of the soft palate, and running forwards and implicating the hard textures as well, to the extent of near half an inch. The cleft was not very wide, and in other respects it was considered by Mr. Fergusson to be a case which might be remedied by his operation. Accordingly, on Saturday, May 10th, the operation was performed in the following manner. The knife for making the preliminary incisions (consisting of a short narrow blade set at right angles to a long handle) was carried up above the cleft on either side, the cutting edge being turned outwards, and, by a firm and continuous movement of the hand from before backwards, the levatores palati were incised across. The extremity of the flap on the left side was then seized by a hooked pair of forceps; this was held by the left hand, and with the right Mr. Fergusson used a narrow sharp-pointed knife to pare the edge. After this was accomplished, that on the right side was made raw. These important steps being accomplished, a sharp and long-bladed needle, set in a firm handle, and carrying a long silken ligature, was carried with a firm and somewhat sudden movement of the wrist through the upper portion of the flap on the left side. As soon as the point of it was fairly discerned as having pierced the flap, the thread was seized with a long pair of forceps, the operator still keeping firm hold of the handle of the needle until the thread was fairly laid hold of. The instrument was then withdrawn. A thread of a different colour was now introduced through the opposite side of the palate, in the same manner. The two were tied together, and thus a single thread made, passing across from side to side. Two other sutures were introduced on either side lower down. Then the wound being well sponged, they were tied firmly, and the edges of the cleft were brought together in the most accurate manner,—of course excepting that in the hard palate, which remained open.

For the satisfactory completion of this operation it is necessary to be very handy,

and to pay particular attention to various points. In the first place, the patient himself must give his full consent, and be determined to bear the operation with courage and patience, as it is impossible to do it under the influence of chloroform. The head should be well supported by an assistant, and plentiful supplies of iced water should be in readiness, for the purpose of clearing the mouth and suppressing the hæmorrhage, which in some instances is somewhat abundant. It is well to have some small pieces of sponge in readiness, so as to wipe away the blood and mucus from the edges of the cleft, more particularly before tightening the threads. If these little but important matters be well attended to, the operation, which may be one of the most difficult and trying nature, will be rendered much more simple both to the patient and to the surgeon.

The knot which Mr. Fergusson uses in bringing the edges of the cleft together is different from that ordinarily employed, and is very simple. Instead of making the first turn of the knot in the common way, and carrying the fingers upon it through the mouth to the palate, which is a very awkward expedient in such a locality, Mr. Fergusson makes a simple loop on one side of the thread, and then passes the other extremity of the same through this loop; and by this means a running knot is made, and easily carried down by the extremities of the index fingers to the palate: the cleft is brought closely together. The knot is now firmly kept in its position, by keeping the threads tense on each side, and, by a careful and somewhat rapid manœuvre of the fingers, another turn of the ligature is made in the ordinary manner, and the knot made accurately fast.

The patient who was operated upon went on favourably. She was rather low two days after the proceeding, and was ordered to take plenty of fluid nourishment, beef tea, and eggs; and on the third day a little wine. She was strictly commanded to take nothing solid, and not to talk. On the eighth day Mr. Fergusson removed the stitches, when union by the first intention had taken place all along the palate.

It is necessary that the patient should be well supported after this operation, as there is some chance of sloughing taking place to a greater or less extent along the line of the recently united palate, if he is allowed to get too low. At the same time the parts must be kept in as quiet a condition as possible, for fear of the tender adhesions giving way: therefore solid food, which will too much excite the action of the palatal and pharyngeal muscles, must be withheld, and only fluid nourishment,

such as strong beef-tea, jellies, and wine, be continually given. The patient, too, must not be permitted to talk until firm union has taken place; and the best mode of obviating the natural wish to do so, is to permit him to have pen and ink, or pencil and slate, so as by that means to communicate his ideas to his friends and attendants.

Strangulated Femoral Hernia.

Anne Poole, aged 45, a thin and very old looking woman, was brought into the hospital on April 10, with a strangulated femoral hernia on the right side. She had suffered from it during the last three years. It appears that she was suddenly seized, on the 7th, with pain in the belly and vomiting, upon which she sent for a surgeon, who applied some external remedy to the abdomen; but as the symptoms continued unabated, the patient sent for another surgeon, who readily detected the hernial protrusion, and attempted to reduce it by the taxis; but not succeeding in this, he sent her into the hospital. On her arrival, the rupture, which had now been strangulated a great many hours, was about the size of a walnut, elastic, and not very tender. The sickness had increased in severity, and the matter vomited was stercoraceous. Pulse was exceedingly rapid, and so was the breathing; tongue was furred; countenance anxious.

At 12 o'clock P.M. Mr. Fergusson performed the operation, by making a limited incision, about an inch in length, on the inner side of the tumour. He divided the different coverings, and having cut Gimbernat's ligament, he was enabled to loosen the stricture and to return the bowel, without opening the sac; but he still deemed it wise to make an opening into it. The bowel was found to be in a fit condition to be returned into the abdomen. The operation was finished, and the wound was united by a single suture. Water-dressing, compress, and bandage, were applied. The patient's pulse fell after the operation; she had less pain, but the sickness continued for some time afterwards.

11th.—Has not slept during the night, and she has vomited. The bowels have not yet been relieved, and she has a troublesome cough, for which she is taking a pectoral mixture. In the evening she became restless, and the abdomen became tender on pressure; bowels not yet moved; pulse full and very rapid. To take thirty minims of laudanum; to apply hot fomentations to the belly. At night-time she became relieved, and felt more comfortable.

12th.—Has passed a very good night; slept well, and was not restless. The

wound is looking remarkably well, and has been dressed with strapping and wet lint. Bowels have not been opened. To have one ounce of castor oil, and to take some brandy.

13th.—Bowels were well opened by the castor oil. The wound is healing well. She remains very weak.

16th.—She remains very weak, and an erysipelatous blush has appeared on the abdomen. The wound is healing up. She is ordered to take beef-tea, brandy, and ammonia. From this date the patient suffered from a very severe attack of erysipelas, which brought her down to a very low condition; but by means of liberal support she has been enabled to struggle through the attack; but she is now in a somewhat precarious condition from the effects of this attack. The wound, however, made in the operation has almost entirely healed up, and, with care, she may rally from her weakness.

From the many cases of strangulated hernia which we have from time to time published from this hospital, it will be seen that the surgeons do not confine themselves to one particular method of operating. In some of the operations the hernial sac has been opened, and in others it has been thought that the ends of the proceeding would be best answered by reducing the hernia without cutting into the peritoneal cavity. Those who have taken the trouble to follow up the cases which have been reported, will see what are those in which each operation is most available. It will be seen that in those instances where the hernia had not been strangulated for any length of time, when the symptoms were not so severe as to lead one to the apprehension of serious mischief having occurred to the strangulated portion of gut, that the operation has been attempted, or performed, without the surgeon dividing the sac; and in these favourable cases success has resulted; whereas in those more serious cases, where the hernia has been of long standing, where strangulation has been existing for upwards of two or three days, and the symptoms have been such as to lead the surgeon to suppose that ulceration or gangrene of the intestine has occurred, the sac has been opened, and the intestine looked at before it has been returned into the abdomen. Nevertheless, in the majority of these cases a speedy and fatal result has occurred; not, indeed, from the sac having been opened, but in consequence of the strangulation being allowed to go on for such a length of time. The fact of ulceration or gangrene of the intestine having been found after death, as was the case in two

of the instances reported, shews that it is necessary to open the sac when strangulation has been of long duration, and the general symptoms are very severe. In the case reported above, there was no absolute necessity to open the sac, as the intestine was returned upon dividing Gimbernat's ligament; yet the symptoms were such, and strangulation had taken place so many hours, that it was perhaps the safest alternative for the patient to open the sac, and look at the condition of the intestine before returning it.

Correspondence.

MR. ACTON ON MR. SYME'S OPERATION FOR STRICTURE.

SIR,—I am induced to think that your correspondent, "A Subscriber," who gives it as his opinion "that it is an imperative duty on me to state the particulars of the fatal cases of stricture and the immediate cause of the deaths attending the perineal section," cannot be in possession of my work on Diseases of the Urinary and Generative Organs, but that he must have quoted from the very flattering and favourable review of the book which appeared in your journal.

If your Che-hire correspondent will refer to the foot-note attached to the quotation you extracted, he will find the information required; if, after perusing the original, he shall remain unconvinced, and will, either in your pages or by private letter, inform me what further information he requires, I shall be happy to answer his inquiries. I would, however, remind your correspondent that, had I filled my already bulky volume with the details of cases I had witnessed, my book would have lost its practical character, as well as "that distinctive and pre-eminently diagnostic value" which you have been pleased to accord to it.

I am, sir,

Your obedient servant,

W. ACTON.

46, Queen Anne Street,
Cavendish Square,
July 1851.

Medical Intelligence.

THE CHOLERA IN JAMAICA.

THE subjoined intelligence up to the 13th ult. has been received from Jamaica:—

"We understand that the cholera, which, it has been already announced, had made its appearance in Westmoreland, has ex-

tended from Maylersfield to Friendship, attacking every estate on the banks of the Cabiritta river. At Mesopotamia and Friendship there have been ten deaths, and one at Blackheath. The disease also exists at the Mint and King's Valley, Grange Hill, and Lincoln; and one case is reported at the Big-bridge. One fatal case has occurred in the town of Savannah-la-Mar, brought from the infected district. This occurred on Saturday last. No other case is reported in the town; but a good deal of diarrhoea exists round the place where the person died. It is stated that the custos of Westmoreland, who is in this city, has been applied to to procure a supply of medicines and a medical man. The former has been procured by him; but we are not aware whether the services of a medical man can be or have been secured. We fear that in this latter respect Mr. McNeel's exertions will be unavailing."

ST. LUKE'S HOSPITAL FOR LUNATICS— STATISTICS, &c.

THE centenary festival of this charity was lately celebrated at the London Tavern. The Right Hon. C. S. Lefevre, the Speaker of the House of Commons, occupied the chair.

The CHAIRMAN in addressing the assembly, said they had before them a most able report of the physicians of the hospital, to which were appended some valuable statistical tables drawn up with the greatest care. From this interesting document they learnt that out of 19,029 patients who had been admitted to the hospital from its opening, on the 31st of July, 1751, to the 31st of December, 1850, there had been discharged, cured, 8,389. But, there were circumstances and considerations which cannot be made apparent in such a report, but which ought not to be altogether overlooked. The report told them of the cures that had been effected, but it did not tell them of the happiness which those cures had diffused, or of the misery which they had alleviated. Many improvements had of late years been introduced into the treatment and management of the poor insane. That system of coercion which too often, even under the ablest superintendence, degenerated into a most cruel tyranny and torture, had passed away. Compassionate tenderness had been substituted for it, and the poor lunatic had a greater share of comfort in the hospital than it was his lot to enjoy in his own home. While these improvements have been going on, if we look to the proportion of the cures, to the number of patients admitted, nothing could be more satisfactory in the result. It appeared that in the last year 69 and a fraction, or nearly 70 per cent. out of those

admitted, had been discharged cured. Were they to stop there? He knew it had been said by those who had a right to speak with authority on this matter, and for whose opinions he entertained a very great respect, that this hospital, owing to its unfavourable site, and the difficulty of affording air and exercise to the patients, ought no longer to be continued; that it was not worth while to improve it, but that it ought to be removed without the walls of this metropolis. But, he would ask, where were the funds to come from to rebuild this hospital? It appeared that it cost 50,000*l.* ages ago to build the present structure, and where was the source whence to derive another 50,000*l.* to erect a new one? Would it not be a far wiser course to make all those improvements in the present building which science and experience enabled them to do? He most earnestly hoped that all those whom he had the honour to address would exert themselves in support of that humane undertaking.

The amount of subscriptions announced was about £2,500, exclusive of certain donations, the amounts of which were not stated by the treasurer.

TESTIMONIAL TO DR. LAYCOCK, OF YORK.

A handsome silver tea service has been presented to Dr. Thomas Laycock, of York, by the Associated Licentiates Extra Urbem of the College of Physicians, with the following inscription:—

“Presented to Thomas Laycock, M.D., Physician to the York Dispensary, Lecturer on the Practice of Medicine in the York Medical School, &c. &c., by his friends, the Associated Licentiates Extra Urbem of the Royal College of Physicians of London, in testimony of their very cordial esteem and regard, and in gratitude for the ability, energy, and zeal with which he has maintained their rights and interests.—Anno Domini, 1851.”

CONTRIBUTIONS TO UNIVERSITY COLLEGE HOSPITAL.

THE Committee, at their meeting on Wednesday last, received payment of £360 legacy of the late Mr. Robert Charles Cullen, of Maldon, Essex, and ordered that sum to be added to the other permanently-invested funds of the hospital—viz., £300 bequeathed by the late Rev. Dr. Fellowes, and £200 given by an anonymous benefactor (“W. L. D.”) in 1834 and 1835, with directions that those sums should be invested.

THE GERMAN HOSPITAL AT DALSTON.

THE annual general court of the governors of the German Hospital was lately

held at the London Tavern. The report, which was read, showed the number of in-patients during the last year to have been 472, and the joint number of out-patients at the hospital, and at the eastern and western dispensaries, amounted to 4,083, of which 1,682 at the hospital dispensary were poor English. The number of in-patients since the opening of the hospital in 1845 was 2,466, and of out-patients 15,043. The year’s accounts showed an income of 2,611*l.*, exclusive of 703*l.* received for the erection of the proposed Adolphus-ward—a ward for sick women and children, which the committee think of founding in remembrance of his late Royal Highness the Duke of Cambridge. The expenditure was 2,189*l.*, leaving a balance of 534*l.* in favour of the hospital, besides 1,200*l.* of funded property.

ELECTION OF EXAMINERS FOR THE QUEEN’S UNIVERSITY IN IRELAND.

THE following candidates for the office of Examiners in the Queen’s University of Ireland were duly elected by the senate at a recent meeting, held in the Council Chamber, Dublin Castle:—Cathcart Lees, M.D., in the Theory and Practice of Medicine; John Hamilton, M.D., in Surgery; H. Carlisle, M.D., of Belfast, in Anatomy, Physiology, and Comparative Anatomy; James Apjohn, M.D., in Chemistry; Alexander Fleming, M.D., of Cork, in Materia Medica, Pharmacy, and Medical Jurisprudence; George J. Allman, M.D., in Zoology and Botany; Thomas M’Keever, M.D., in Midwifery and the Diseases of Women and Children.

ADMISSION OF FELLOWS AT THE ROYAL COLLEGE OF PHYSICIANS.

AT the Comitia Majora held on the 25th ult. the following licentiates were elected to the fellowship of the College: namely, Dr. A. Whyte Barclay, of Curzon Street, May Fair—Dr. William Macintyre, of Harley Street—Dr. Richard Quain, of Harley Street—Dr. Theophilus Thompson, of Bedford Square—and Dr. William Wegg, of Maddox Street.

ROYAL COLLEGE OF SURGEONS.

GENTLEMEN admitted members on the 27th ult.:—G. Whitley—E. Chapman—C. J. White—C. T. Pearce—J. Williams—J. Wilkins—D. T. Morris—R. B. Kidd—W. G. Bacot—T. R. Johnson—J. P. Nash.

Admitted on the 4th inst.:—Messrs. F. J. Windus—S. Browne—W. H. Folker—J. R. Price—R. Williams—H. B. Sayers—F. Nuttall—T. Hales—T. A. Bottomley—H. Cole—W. H. Harris—and B. Shillitoe.

Admitted on the 7th inst.:—Messrs. W. Hurst—G. S. D. Harris—C. F. Lewis—

L. H. J. Hayne—W. H. Carter—E. P. Gamble—T. Peete—S. C. Townsend—G. Bull—F. J. Money.

OBITUARY.

ON the 2d inst., Frederick Gilbertson, Esq., surgeon, Egham-hill, Surrey.

EPIDEMIOLOGICAL SOCIETY.

July 7, 1851.

AT the Ordinary Meeting of the Society, held this day, at the house of the Royal Medical and Chirurgical Society, 53, Berners Street, DR. ADDISON in the Chair, the following donations to the funds were announced:—A donation of ten guineas from the Guardian Life Assurance Company; a donation of ten guineas from the Pelican Life Assurance Company; a donation of ten guineas from the Eagle Life Insurance Company; a subscription of one guinea, annually, from the Anchor Life Assurance Company.

MR. HUNT read a paper "On the Uses and Limits of Statistical Science as applied to the Study of Epidemics." The author having exposed the fallacious tendency of the various accounts which were generally published during the raging of an epidemic, proceeded to show that the legitimate application of statistics was the natural corrective of these fallacies, presenting not merely a few interesting or extraordinary facts, but a multitude of ordinary facts, the influence of which became counteractive of the preponderating weight of a few rare incidents in the history of disease.

He then glanced at a few of the special difficulties attending the medical department of statistics, arising from the variations in the subjects of disease, and in the circumstances under which they might become exposed to morbid or therapeutic influences; these difficulties being so formidable, in the department of therapeutics, as to prevent the successful application of statistical inquiries to that particular branch of medicine, while it was specially adapted to the prophylactic department. Thus the influence of vaccination in the prevention of small-pox might easily be solved if the profession generally would lend a helping hand, by replying to the inquiries on this subject already issued by the Society.

Drs. Addison, Theophilus Thompson, and Seaton, and Mr. Walsh, took part in the discussion on Mr. Hunt's paper.

It was announced from the chair, that a paper "On the Nature of Epidemics," by

Mr. Grove, of Wandsworth, would be read at the Ordinary Meeting to be held on Monday, August the 4th.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, July 5.

| BIRTHS. | | DEATHS. | |
|-----------|-----|-----------|-----|
| Males.... | 746 | Males.... | 534 |
| Females.. | 784 | Females.. | 469 |
| 1530 | | 1003 | |

CAUSES OF DEATH.

| | |
|--|------|
| ALL CAUSES | 1003 |
| SPECIFIED CAUSES | 1001 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 214 |
| <i>Sporadic Diseases, viz.—</i> | |
| 1. Dropsy, Cancer, &c. | 46 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 132 |
| 4. Heart and Bloodvessels. | 33 |
| 5. Lungs and organs of Respiration | 114 |
| 6. Stomach, Liver, &c. | 68 |
| 7. Diseases of the Kidneys, &c. | 11 |
| 8. Childbirth, Diseases of Uterus, &c. | 3 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 7 |
| 10. Skin..... | 3 |
| 11. Premature Birth..... | 27 |
| 12. Old Age | 40 |
| 13. Sudden Deaths..... | 16 |
| 14. Violence, Privation, Cold, &c.... | 60 |

The following is a selection of the numbers of Deaths from the most important special causes:

| | | | |
|-------------------|----|------------------|-----|
| Small-pox..... | 16 | Convulsions..... | 34 |
| Measles..... | 29 | Bronchitis | 36 |
| Scarlatina | 22 | Pneumonia | 13 |
| Hooping-cough ... | 38 | Phthisis | 142 |
| Diarrhoea..... | 23 | Lungs | 7 |
| Cholera..... | 1 | Teething | 9 |
| Typhus..... | 46 | Stomach | 9 |
| Dropsy | 17 | Liver..... | 17 |
| Hydrocephalus ... | 36 | Childbirth | 1 |
| Apoplexy | 33 | Uterus | 2 |
| Paralysis | 24 | | |

REMARKS.—The total number of deaths was 131 *above* the average mortality of the 27th week of ten previous years.

METEOROLOGICAL SUMMARY.

| | |
|--|-------|
| Mean Height of the Barometer | 29.87 |
| Thermometer ^a | 62.9 |
| Self-registering do. ^b Max. 93° Min. 34° | |

^a From 12 observations daily. ^b Sun.

RAIN, in inches, .76.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 1.9° *above* the mean of the month.

NOTICES TO CORRESPONDENTS.

F. F. de la Figanier (name scarcely legible).—Dr. W. R. Wagstaff. His book was noticed at page 1117 of our last volume. His name is not in the Directory, but his address may be procured by application at his publishers.

Mr. J. Hinton's Cases will be inserted. His letter has been forwarded to the publishers.

Several communications, which are in type, are unavoidably postponed.

Lectures.

LECTURES

ON

TUMOURS,

Delivered in the Theatre of the Royal College of Surgeons of England.

BY JAMES PAGET,

Professor of Anatomy and Surgery to the College.

LECTURE V.—PART I.

Fibrous tumours—Their distinction from the corresponding outgrowths—General form, connections, investments, and structure of fibrous tumours—Microscopic characters in different specimens—combinations with muscular and elastic tissues, and with bone—Formation of cysts, and deposit of lime-salts, constituting the “fibro-cystic” and “fibro-calcareous” tumours—Disintegration and other diseases.

Particular illustrations of fibrous tumours growing on tendinous or fibrous tissues—In the subcutaneous tissue—In or upon periosteum and bone—In or about the jaws—In the lobules of the ears—Summary of observations.

THE name of “fibrous tumour” appears the best, among the sixteen or more, by which different writers have described the tumours whose chief characteristic is their likeness to the natural fibrous or tendinous tissue of the body. This, at least, seems the best for a general designation; and to those among them which are constructed of more than one elementary tissue we may give such names as “fibro-muscular,” “fibro-elastic,” “fibro-calcareous,” &c.

The most frequent and notorious examples of the species are the fibrous tumours, or fibrous bodies, of the uterus; the “hard, fleshy tubercle of the uterus,” as it was described by Dr. Baillie. From these, chiefly, the general characters of the species may be described.

First, the usual distinction must be drawn between the tumours and the outgrowths of the same structure. The uterus presents examples of both. The fibrous uterine polypi, more properly so called, are continuous outgrowths of and from the substance of the uterus; the mucous membrane, and the muscular and fibrous tissues of the uterus, growing, in variety of proportions, into its cavity and that of the vagina. The fibrous tumours, as distinguished from these, are discontinuous

growths of similar tissue, in or near, not of, the substance of the uterus.*

The distinction is often difficult to make during life; for the pendulous, polypoid, and narrow-stemmed outgrowth may be imitated, in all its external characters, by a tumour growing near the surface of the uterus, and projecting into its cavity, with a gradually thinning investment of its muscular and mucous tissues. On dissection, however, the continuity of the polypus or outgrowth, and the discontinuity of the tumour, may generally be discerned, even in specimens which, like two in the museum of St. Bartholomew’s Hospital, are, in external appearance, exactly alike.†

Similar differences exist among what are classed together as fibrous tumours of bone or periosteum: some, as we shall see, are tumours; some are outgrowths, and the line of distinction cannot be well drawn.

The fibrous tumours, of which alone I shall at present speak, appear to have a natural tendency towards a spherical or oval shape, with a smooth or superficially lobed surface; but from these marks they often deviate, in adaptation to mutual pressure or the different resistances of surrounding parts. When, for example, a fibrous tumour is pendulous, its more dependent portion usually grows most, and it tends from the spheroidal to the pyriform shape; or when one grows into a cavity, it is apt to assume the shape of that cavity, whatever it may be, or else to become deeply lobed. Such varieties as these are often seen in the fibrous tumours of the upper jaw, according as they grow into the antrum or project into the cavity of the mouth; and greater diversities occur among many specimens of the fibrous tumours and polypi of the uterus.

The fibrous tumours have usually a complete fibro-cellular capsule; and in the uterine walls this is sometimes peculiarly dry and loose, so that when one cuts on the tumour, it, almost of itself, escapes from its cavity or bed. So, too, are covered the fibrous tumours in the subcutaneous tissue and the nerves, and those parts of the fibrous tumours and outgrowths from bones which are in contact with other tissues than those from which they spring.

To the touch, the fibrous tumours are usually very firm, often extremely so; they may even be as hard and incompressible

* The distinction is expressed by M. Cruveilhier (*Anatomie Pathologique*) by the terms “corps fibreux implantés,” and “corps fibreux non implantés;” but the “corps fibreux” of the breast, which were described by him, and led to the renowned discussion at the French Academy of Medicine, were, for the most part, mammary glandular tumours, and nearly solidified proliferous cysts.

† Series xxxii., Nos. 12 and 34.

pressible as hard cancers are. If they are soft, or "fleshy," or succulent, it is, I think, always through œdema or inflammatory softness and infiltration of their substance; for such characters as these are very rare, except in the case of the pendulous or protruding tumours, or in those that are manifestly diseased. Moreover, in all ordinary cases the fibrous tumours are heavy, very elastic, and very tense, so that their cut surfaces rise in convexities like those of intervertebral fibrous cartilages.

In the examination of sections, the most ordinary characters that one sees are, that the tumours present a greyish basis-substance, nearly homogeneous, and intersected with opaque, pure white bands and lines. They have a general resemblance in their aspect to a section of fibrous cartilage, such as that of the semilunar or the intervertebral cartilages. Many varieties, however, appear; the basis substance tending towards yellow, brown, or blue, and the white lines being variously arranged.

It would be tedious to describe minutely these various arrangements: let it suffice that there are three principal, but often mingled, plans.* In some tumours the bundles of white fibres tend to form concentric circles round one or many centres; so that in the section we have a vague imitation of the aspect of the intervertebral fibro-cartilages, the appearance of concentric fibres representing an arrangement of layers successively enclosed, in the same involute manner as I described in one of the varieties of fatty tumours. These are generally the hardest and least vascular of the fibrous tumours; usually, too, they are spherical.

In another variety of the tumours, the white bands course in variously sweeping curves and undulations, the components of the larger bundles diverging and interlacing. In another, the fibres are less fasciculate, and appear as if closely matted in a nearly uniform white substance; and, in the extreme specimens of this form, which are most commonly found on the jaw-bones, a fibrous structure is scarcely to be discerned with the naked eye: they look nearly uniform, pale or white, and very firm; but the microscope proves their identity with the other varieties.

As on the exterior, so in sections, these tumours present various degrees of lobular arrangement. Some are uniform and scarcely partitioned; while others are formed in distinct and easily separable pieces; and between these are numerous intermediate forms.

As a general rule, the vascularity of a fibrous tumour is in an inverse proportion

to its singleness and toughness of construction; for the blood-vessels, as in the natural fibrous structures, are distributed chiefly or exclusively in the fibro-cellular tissue partitioning and investing the denser substance. The tumours thus present various degrees of vascularity. Some, when the vessels of the uterus are fully injected, appear still quite white; but some appear as highly coloured with the injection as the uterus itself.*

In microscopic examination, one finds, among the fibrous tumours, certain varieties of composition which are not always, if at all, expressed in their more manifest characters. In all, I believe, a large portion of the mass consists of tissue resembling the tendinous or fibrous, more or less perfectly developed, and variously arranged.† This is the case in all parts of the tumour—in the more homogeneous basis-substance as well as in the intersecting bands; the microscopic differences between these parts consisting, I think, only in the less or more regular arrangement of the fibrous structure or fibrous appearance of the tissue. But in different specimens, or even in different parts of the same, the tissue appears less or more perfectly formed; so that, while in some, distinct filaments or undulating fasciculi may be dissected out, in others there is rather a fibrous appearance than a fibrous structure. Commonly, too, one finds nuclei or cytoblasts strewn through the substance of the tumour; the less abundantly, I think, the more perfect is the fibrous character of the tissue. But in all these respects there are not, I think, more or other differences among fibrous tumours than might be found in a series of natural fibrous tissues.

With these constituents, other elementary tissues are mingled in certain fibrous tumours. In those in the uterus, smooth or organic muscular fibres are more or less abundant. I have not, indeed, seen such a specimen as would quite justify the name of "muscular" tumours assigned by Vogel: but the mingling of the muscular fibres, as if in imitation of the tissue of the uterus itself, is usual, if not constant, in the uterine tumours.

In the subcutaneous fibrous tumours, and in some, I believe, of the uterine tumours also,‡ elastic fibres, with all their fully developed characters, may be intermingled with

* Remarkably good specimens illustrating these points are in the Museum of the Middlesex Hospital.

† Some of the best examinations are by Valentin, in his *Repertorium*; and by Bidder, in *Walter, Ueber fibröse Körper der Gebärmutter*, p. 37.

‡ See Bidder, in *Walter*, l. c., p. 38. I have found, also, in a subperitoneal fibrous tumour in the stomach, elastic fibres just corresponding with those of the natural subperitoneal tissue.

* See Nos. 2666, 2671, 2672, in the Museum of the College of Surgeons.

the more abundant fibrous tissue. The structure of fasciæ is thus imitated; and if we call the kind last mentioned "muscular" tumours, these should be named "fascial."

Again, in the fibrous tumours on bones, bone, in small plates or spicula, is often present; or there may be mixtures of fibrous and cartilaginous tissue. Possibly, also, other mixtures of tissues may occur in what we commonly accept as fibrous tumours; but I suppose that a general statement may be truly made to the effect that the common characters of fibrous tumours, such as I just described, are usually modified towards an imitation of tissues in or near which they are severally placed.

Their structural homology is thus complete; and I presume they may be equally similar in chemical properties. All yield gelatine on boiling; but I am not aware of any examination of their other constituents.

To the varieties of the fibrous tumour already named, two must yet be added, depending on changes which we may regard as degenerations. One consists in the formation of cysts, the other in the deposit of calcareous and other salts in the substance of the tumour; suggesting, severally, the names of the "fibro-cystic," and the "fibro-calcareous" tumour.

The formation of cysts is not rare in fibrous tumours, especially in such as are more than usually loose-textured. It may be due to a local softening and liquefaction of part of the tumour, or to an accumulation of fluid in the interspaces of the intersecting bands; and this is the probable mode of formation of the roughly bounded cavities that may be found in uterine tumours. But, in other cases, and especially in those in which the cysts are of smaller size, and have smooth and polished internal surfaces, it is more probable that their production depends on a process of cyst formation, corresponding with that traced in the cystic disease of the breast and other organs. The whole subject, however, in relation to the origin of the cysts, needs further consideration; and I will speak only of the general appearance of the fibro-cystic tumours.

First, then, we find examples of fibrous tumours thickly beset with small well defined and lined cysts. This appears to be the nature of the "hydatid testis" described by Sir A. P. Cooper: at least, most of the specimens that I have seen of it make me think that this is, essentially, a fibrous tumour in the testicle, with more or less of cyst formation in the tumour. A similar condition may be found, but is rare, in fibrous tumours of the uterus. It may be found, also, I believe, in fibrous tumours in nerves and other parts.

In another set of cases, we find one large

cyst existing alone, or far predominating over all the others, in a fibrous tumour. This is most frequent in the tumours in the nerves,* and in the uterus. In the latter organ it has peculiar interest, because the cyst, if it attain a great size, may be mistaken, and treated for an ovarian cyst. Several such cases have happened. The preparation from one is in the Museum of the College;† the history of which, sent by Sir Everard Home, is, that it is "A portion of an uterus, in which a very large encysted tumour had formed. The patient had been twice tapped, and the cyst emptied. The case was supposed to be ovarian dropsy during life." In another case, Mr. Cæsar Hawkins, suspecting ovarian disease, drew fifteen pints of fluid from a great cyst in a fibrous tumour of the uterus.‡ The patient died a long time afterwards, and the specimen, which is in the Museum of St. George's Hospital, shows an enormous fibrous tumour in the side wall of the uterus, having one vast cavity, and in its solid part many small cysts.

With regard to the fibro-calcareous tumour, it is to be observed that two methods of calcification exist,—a peripheral, and an interstitial. In the former, which is the rarer, we may find an ordinary fibrous tumour coated with a thin, rough, nodulated layer of chalky or bone-like substance.§ In the latter method, a similar substance is deposited more abundantly throughout the tumour, and is usually so arranged, that, by maceration, one obtains a heavy hard mass, variously knotted, and branched like a lump of hard coral. Such a specimen is here:|| it was found in a grave-yard, and was sent to Mr. Hunter as an urinary calculus; and a good one it would have been, seeing it is about five inches long. On analysis it yielded 18·644 per cent. of animal matter, consisting of gelatine, with a small proportion of albumen; and its other chief constituents were found to be phosphate and carbonate of lime, the proportion of carbonate being greater than in human bone.

A similar, but larger, specimen is in the Museum of St. George's Hospital; and one yet larger in that of the Middlesex Hospital, which has been described, with a history full of interest, by the President.¶

* See Smith on Neuroma, p. 6.

† No. 2657.

‡ MEDICAL GAZETTE, vol. xxxvii. p. 1022. This specimen and others are described by Mr. Prescott Hewett in the London Journal of Medicine. See, also, on suppuration in these cysts, Dr. Robert Lee, in the Med. Chir. Trans. vol. xxxiii.

§ As in Mus. Coll. Surg. No. 2670.

|| Mus. Coll. Surg. No. 266.

¶ Medico-Chirurgical Transactions, vol. xxiii. p. 199.

Now, the change which ensues in these cases is not ossification; true bone, I believe, is not formed in the fibrous tumours of the uterus. The change is a calcareous degeneration, consisting in an amorphous deposit of salts of lime and other bases in the place of the fibrous tissue.* But the process is important, as being the manifestation of a loss of formative power in the tumour. The calcified fibrous tumours probably never grow, and are as inactive as the calcified arteries of old age.†

With these degenerations I may mention, (though it has probably more of the nature of a disease), a softening of fibrous tumours, in which, quickly, and apparently in connection with increased vascularity and congestion, they become œdematous, and then, as their tissue loosens, become very soft, or even diffuent, or else break up, and appear shreddy and flocculent. In this state the outer and less softened part of the tumour may burst, or they may suppurate or slough.‡

The most frequent seat of fibrous tumours is, beyond all comparison, in the uterus. Indeed, we may hold that the fibrous uterine tumours are the most frequent of all innocent tumours; Bayle's estimate being probably true, that they are to be found in 20 per cent of the women who die after 35 years of age. But I shall not dwell on the fibrous tumours in the uterus, fully described as they are by Dr. Robert Lee, and other writers on uterine pathology. I will only say, that such tumours may occur near, as well as in, the uterus; but that, in respect of this nearness, they are probably limited to those parts in which fibrous and smooth muscular tissue, like those of the uterus, extend; namely, to such parts as the utero-rectal and utero-vesical folds, and the broad ligaments.§

Next to the uterus, the nerves are the most frequent seats of fibrous tumours. But of these, while I can refer to the splendid monograph by Dr. Smith, I will say only that, among the neuromata the fibrous tumours reach their climax of multiplicity, existing sometimes in every nerve

of the body, and amounting to 1200 or more in the same person.

So, too, I will pass by the fibrous tumours of bones, referring for these to Mr. Stanley's Treatise on the Diseases of the Bones, and to Mr. Cæsar Hawkins's Lectures on their Tumours.*

Instead of these instances of fibrous tumours, the histories of which have been so fully written, I will select for illustration some that are less generally studied, especially those that are found in the subcutaneous tissue, and deeply seated near the periosteum, or other fibrous and tendinous structures.

The fibrous tumours of the subcutaneous tissue, to which those of the submucous tissue closely correspond, pass, as I have already said, with insensible gradations into the fibro-cellular. Many may be found that might deserve either name; but it is not very rare to find specimens with all the distinctive features ascribed to the fibrous tumours of the uterus. These form firm, nearly hard, and tense, round or oval masses imbedded in the subcutaneous fat, raising and thinning the cutis. They may here attain an immense size, as in a case from the Museum of Mr. Liston.† A tumour, weighing upwards of 12 pounds, is here shown, which was removed from the front of a man's neck, together with a portion of the integuments and platysma that covered it. It was fifteen years in progress, and has now an aspect such as, I think, belongs only to a fibrous tumour. Specimens, however, of this size are very rare; they are commonly removed while less than an inch in diameter.

In microscopic characters the subcutaneous fibrous tumours have the general properties of the species, but they commonly contain elastic tissue, and they are apt, I think, to be lowly developed, having only a fibrous appearance, or even seeming composed of an uniform blastema, with imbedded elongated nuclei, like the material for the formation of new tendons.

A peculiar and important character in these fibrous tumours is, that though they may be completely isolated in every other part, they often adhere closely to the lower surface of the cutis, and that, if in any degree irritated, they soon protrude through it, and form vascular masses,—‘fungous growths’ as they are called. When this happens they may bleed profusely, and in a manner which, I believe, is not imitated by any other innocent tumour. Nearly five years ago, a woman 52 years old was under Mr. Stanley's care, with a tumour

* On the appearance of a crystalline form in the deposits, see Dusseau; Onderz. van het Beenweefsel en van Verbeeningen in zachte Deelen. Pl. vii.

† A remarkable exemplification is in Mr. Arnott's case. In 40 years a calcified tumour did not more than double its size.

‡ The whole of this process is extremely well described in Mr. Humphry's Lectures on Surgery, Lec. xxviii. p. 139.

§ It appears, indeed, to be this mixed tissue to which the fibrous tumours particularly attach themselves; for they are in close relation with it in other parts besides the uterus,—*e. g.*, in the skin, and the sub-mucous tissue of the digestive canal and other parts.

* MEDICAL GAZETTE, vols. xxi.-ii.-v.

† Mus. Coll. Surg., 222.

that projected through the integuments in the inner part of the thigh, its base being imbedded deep in the subcutaneous tissue, and its surface protruding raw and ulcerated. The origin of this tumour was uncertain, but it had existed more than nine years; it had grown quickly, and had begun to protrude within two and a half years. From its ulcerated surface hæmorrhage frequently ensued; and the patient stated that at one time two quarts of blood flowed from it. The tumour was excised, and large vessels that entered its base bled freely in the operation. It appeared to be a well-marked specimen of a soft and lowly developed fibrous tumour.

A similar case was under my care in a woman 27 years old. The tumour, of three years' growth, and protruding over the front of the tibia, was similarly ulcerated, and used often to bleed; sometimes it bled largely, and once as much as half a pint of blood flowed from it. This also on removal appeared to be a fibrous tumour.

I have here, through the kindness of Mr. Birkett, a specimen of a much more formidable example of the same fact. A woman, sixty years old, had a large pendulous tumour in the front wall of her abdomen, suspended just below the umbilicus, and reaching half-way to her knees. Its surface had a very inflamed appearance, and the separation of a slough from its posterior part gave issue to such hæmorrhage as proved quickly fatal.

The tumour is a large, heavy mass, which was attached to the sheath of the rectus. It is every where firm and tough, except where its substance appears broken by blood issuing from numerous large vessels that traverse it. Mr. Birkett, who examined it soon after the patient's death, found its texture certainly fibrous.*

The fibrous tumours that occur in or near accumulated fibrous tissues are well exemplified, medically, by those of the dura mater, and, surgically, by those which may be found at the tarsus or metatarsus imbedded among the complicated ligaments and other deep-seated parts. Some well-marked specimens are in the Museum of the College. One,† from the collection of Mr. Langstaff, is an oval tumour, six inches long, fixed to the periosteum of the tarsal bones and to the adjacent parts, and filling the sole of the foot from the os calcis to the basis of the first phalanges. It was removed, with the foot, from a nobleman,

thirty-five years old, in whom it had been observed gradually increasing for thirty years. It has all the general aspects of the fibrous tumour, as typified in those of the uterus.

A very similar specimen is shown in a tumour growing over the whole length of the dorsal aspect of the metatarsus;* and with these may be mentioned a tumour† which has some historic interest, for it was removed from the Hon. William Wyndham, the associate and friend of Pitt, and Fox, and Burke,—“the model of the true English gentleman.” When he was sixty years old, and an invalid, he exerted himself very actively one night in saving from fire the library of a friend. During his exertions he fell and struck his hip; and from that injury the tumour appeared to derive its origin. It grew quickly, and in ten months it seemed necessary to remove it. Mr. Wyndham submitted to the operation, his biographer says, “with neither hope nor fear;” and it would be difficult to describe so briefly a more unfavourable state of mind. The operation was performed by Mr. Lynn. The tumour was attached to the capsule of the hip, and was with difficulty removed. At first all went well; but then, it is said, symptomatic fever came on, and death occurred on the 16th day. The tumour was, by Mr. Wyndham's request, placed in the Museum of this College; and I have had it sketched because it might be signalized as one of the most characteristic examples of this species.

I might add several to these cases, but these may suffice for illustrations of the fibrous tumours connected with the deep-seated fibrous tissues. All the specimens that I have seen have presented the strong white bands intersecting a greyish or dull white basis-substance, the characteristic firmness, heaviness, and tension; all, in microscopic examination, have shown the tough fibrous structure or appearance; all have yielded gelatine in boiling.

The fibrous tumours in the subcutaneous and deeper tissues are isolated, discontinuous growths, circumscribed by fibro-cellular tissue. In this they differ from most of those in the group of which I shall next speak—namely, the fibrous tumours connected with periosteum and bone; for these accord with the characters of outgrowths rather than of tumours, in that they involve the substance of the periosteum, including it, and investing or covering the bone.

The favourite seats of the fibrous tumours of bone and periosteum are about

* This specimen was sent to the Museum of Guy's Hospital by Mr. Nason.

† No. 220. The other half of the same is in the Museum of St. Bartholomew's Hospital, Series 35, No. 9.

* Mus. Coll. Surg., 219.

† Mus. Coll. Surg., 218.

the jaws; on other bones they are very rare.* The College-Museum is, I suppose, pre-eminently rich in fibrous tumours connected with the jaws, containing as it does the chief of those that were removed by Mr. Liston,—a series illustrative at once of his admirable dexterity, and of his sound knowledge of pathology.

These tumours of the jaws may, to both touch and sight, present the ordinary characters of the fibrous tumours, as already described. They usually approach the round or oval shape, but are generally knobbed, or superficially lobed, or botryoidal as some have called them. They are firm, dense, and heavy. On section, however, the majority of them, I think, are more uniform than the fibrous tumours of other parts. They are generally almost uniformly white, and scarcely intersected by any fibrous bands, except such as may divide them into lobes. Many of them also present, in their interior, minute spicula of compact, white, bony texture.

As to situation and connection, the fibrous tumours of the jaws may be found isolated and circumscribed, growing within the jaw, divorcing and expanding its walls, and capable of enucleation;† but, in the large majority of these tumours, the periosteum, with or without the bone itself, is involved and included. In the case of the upper jaw, either the periosteum, or the fibro-mucous membrane of the antrum or nasal walls, or both of these, may be included in such a tumour. In all cases the tumour lies close upon the bones, and cannot be cleanly or without damage to it separated, except on the outer surface: commonly, indeed, bony growths extend from the involved bone into the tumour; and sometimes the greater part of the bone is as if broken up in the substance of the tumour.

In all these characters of connection the fibrous tumours of the jaws resemble out-growths; they are as if some limited portion of the periosteum were grown into a tumour overlying or surrounding the bone. The character of out-growth is indeed generally recognised in the epulis, or tumour of the gums and alveoli; but I believe Mr. Hawkins is quite right in the view which he has expressed, that the genuine fibrous epulis should be regarded as a fibrous tumour growing, like most of the other fibrous tumours, from the bone and periosteum,

and continuous with them.* That it is prominent and lobed is because it grows into the open cavity of the mouth; and it resembles gum only because it carries with it or involves the natural substance of the gum.

I will refer to but one more set of cases of fibrous tumours—those, namely, that occur in the lobules of the ears. These are, indeed, trivial things in comparison with the tumours of the jaws, yet they have points of interest, in that they grow after injuries, and are very apt to recur after removal. They are penalties attached to the barbarism of ear-rings. Shortly after the lobules of the ears have been pierced, it sometimes happens that considerable pain and swelling supervene. These are apt to be followed by a more defined swelling in the track of the puncture; and this swelling presently becomes a distinct, circumscribed, and well-marked fibrous tumour in the lobule of the ear.

There may be, perhaps, some doubt whether the growth be a proper tumour or a cheloid growth of the cicatrix-tissue formed in the track of the wound; but it has all the aspect of a distinct fibrous tumour, and the skin appears unaffected.

In one case, of which the specimens were presented to the museum of St. Bartholomew's Hospital† by Mr. Holberton, a tumour, such as I have described, formed in the lobule of each ear of a young woman a few months after they were pierced for ear-rings. Both the lobules were cut off with the tumours; but, in or beneath one of the cicatrices, a similar tumour formed shortly afterwards. This was excised; and, in the ten years that have since elapsed, there has been no return of the disease.

In another case, sent to me by Mr. Barrow, of Ryde, two such tumours formed in the same ear after puncture. One of these was cut away, the other was left: a third grew, and the excision of the whole

* I say *fibrous epulis*, because cases may be found resembling common epulis in many characters, yet differing in some, and especially in microscopic structure. M. Lebert classes epulis with fibro-plastic tumours, and I shall refer to specimens justifying the arrangement; but I have also examined some that were of a purely fibrous texture. The subject needs further inquiry, and is of great importance in surgery; for there is always uncertainty about the operations for epulis, probably because among the firm lobed outgrowths from the gums and jaws, to all of which the name is applied, there are two or more kinds of tumours, with as many different properties. The lecture of Mr. Hawkins (MEDICAL GAZETTE, vol. xxxvii. p. 1522) is the best study on the subject of epulis. Mr. Birkett tells me he has found the glands of the gum much developed in some instances of tumours thus named.

† Ser. 35, No. 24.

* The College-Museum contains only two specimens—Nos. 802 and 804.

† For such cases see the Museums of St. Bartholomew's and Guy's Hospitals; Stanley, Illustrations, pl. 16, fig. 8; Ward, Proceedings of the Pathol. Soc., Vol. 2, p. 148.

lobule was necessary for the complete extirpation of the disease.

Similar cases are recorded by Bruch,* Venzetta,† and others; but the histories of the cases are so like these that I need not detail them.

Among tumours so diverse in their seats and relations as the fibrous tumours, there are perhaps few things relating to their life that can be stated as generally true.

In the uterus many may exist at the same time: the whole wall of an uterus may be crammed with them, while others project from it into the peritoneal cavity. As Walter and others have observed, when a fibrous tumour fills the cavity of the uterus, or projects from it into the vagina, it is not usual for another to be found in the walls. Such cases do indeed occur, but they are comparatively rare. It is yet much more rare for fibrous tumours to be found in any other part at the same time as in the uterus. I find but one such case recorded; a case by Dr. Sutherland,‡ in which, with several fibrous tumours in the uterus, one was found in the groin of a lunatic 42 years old. But such a case is a most rare exception to the rule; or, indeed, may be more like an example of the rule, if the tumour were connected with the round ligament, and the therein continuous tissue of the uterus.

In the nerves, as in the uterus, a multiplicity of fibrous tumours may be found; but so far as I know the rule of singleness prevails in every other part liable to be their seat.

The development of fibrous tumours is usually, I believe, through nucleated blastema.

Their growth is often very slow, so that tumours of thirty or more years' standing are found still far short of the enormous dimensions of some of the last species. But no general rule can be made on this point, especially since the rate of growth is influenced by the resistance offered by the more or less yielding parts around.

The extent of growth appears unlimited; and among the fibrous tumours are the heaviest yet known. They have weighed fifty, sixty, and seventy pounds. The tumour that induced Walter to write his admirable essay§ weighed seventy-one pounds. He refers, also, to one of seventy-four pounds, and to one described in an American journal as having been esti-

mated at one hundred pounds; but he asks of this, perhaps impertinently, whether it were weighed also (aber auch gewogen?).

In relation to the degeneration and diseases of fibrous tumours, I need add nothing to what has been said concerning the formation of cysts, the calcification, and the process of softening or disintegration.

And respecting their nature, as being innocent or malignant, I must delay to speak till I have described some tumours that seem nearly related to them.

Original Communications.

CASES IN MIDWIFERY,

WITH REMARKS.

BY THOMAS RADFORD, M.D., F.R.C.P. ED.,
&c. &c. &c.

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[Continued from last vol. p. 1114.]

CASE IV.—On Sunday, the 1st of April, 1820, I was requested to visit Mary Ashworth, residing at Denton, about six miles from Manchester. I was told she was in great danger, having been in labour a considerable length of time, and that no progress was made in the case. This report did not surprise me when I ascertained who the individual was; for Mr. Wood, my partner and esteemed relative, had visited her about the end of the seventh month of her present pregnancy, at the request of her medical attendant, Mr. Morris, a highly respectable surgeon, who resided at Ashton-under-Lyne. Mr. Wood at this period examined her *per vaginam*, and his opinion was, that if her pregnancy did proceed, when labour came on the Cæsarean section would be required, as in her case no other means would be of the least avail. At 3 o'clock P.M. I reached her dwelling, and found Mr. Morris and Mr. Cheetham awaiting my arrival.

I was informed by Mr. Morris that she had been in strong labour about thirty-four hours; that the membranes had ruptured in two hours after its commencement; and that the liquor amnii had gradually passed away. He had not been able to feel the presentation nor the os uteri. The pains were strong

* Die Diagnose der bösartigen Geschwülste

† Annales de Chirurgie, Juillet 1844; and Medico-Chirurgical Review, Oct. 1844.

‡ Proceedings of the Pathological Society, vol. ii. p. 87

§ Ueber fibröse Körper der Gebärmutter. Dorpat, 4to., 1842.

for twenty-four hours, but afterwards gradually abated. The urine had been passed freely during the Saturday; but this day (Sunday) there was no evidence of any having been discharged. The bowels were constipated, and had not been opened during the labour.

Her previous history was to the following effect:—She had borne ten children, nine of whom were expelled by the natural powers. In the last labour considerable difficulty occurred, and the practitioner had recourse to craniotomy. During her tenth pregnancy she experienced considerable weakness in her loins, and felt rheumatic pains about the hips, and limped in her gait. These pains continued from that time till her present pregnancy, but did not increase in degree. When she became again pregnant, her sufferings increased, and her lameness became more manifest. Her stature was now observed to diminish in height. She was forty-two years of age, and was employed as a hat trimmer.

I found her in bed, lying upon the back, with the head and shoulders raised. She moved with the greatest difficulty. The pulse was feeble and frequent, beating about 159 in the minute. She had often vomited, and had great tenderness in the belly, which was considerably increased by pressure. Her tongue was furred and dry, and she complained of great thirst; her countenance expressed considerable anguish. Being requested to compose her mind, she answered, "she was composed, but anxious for relief, and would suffer any pain so that she might be delivered."

Upon examining the abdomen, I found the uterus projecting very much forwards, and lying with its anterior surface upon the upper part of the thighs. By a vaginal examination, I discovered that the labia were much swelled, and the vagina felt dry and rough: it was hotter than natural; and an odour similar to that arising from animal matter, when partially decomposed, was perceived from the hand when it was withdrawn. The outlet of the pelvis had undergone great change; the arch of the pubes was totally destroyed by the near approximation of the rami of the ischia and pubes, having only a small slit, so narrow at the upper and lower parts as not to admit the point of the index-finger: at the middle, however, the finger could just be introduced. The tuberosities of the ischia were not more

than one inch and a half to one inch and three quarters asunder; and the lower portion of the sacrum was so much more incurvated than natural, as to throw the coccyx much more forward, and consequently lessen the conjugate diameter of the lower aperture of the pelvis. This great diminution in the outlet rendered it difficult to pass the hand in order to measure the brim, and it was found necessary to carry it very far backwards in order to accomplish it. This aperture was found much more altered than the outlet; one finger only, edgeways, could be placed between the points of bone in the conjugate diameter. In traversing it from side to side I could detect no great difference; but if there was any, the left was the most contracted. In the transverse diameter I could just place three fingers parallel to each other. The figure of the brim was tripartite, having a slit on each side, and a third passing forwards, produced by the approximation and jutting out of the pubes, which was so narrow that the finger could not pass within it. This alteration in the brim was occasioned by the falling downwards and forwards of the upper part of the sacrum and the lower lumbar vertebra, and by the body of the ossa pubis and ischia being forced backwards and inwards, whilst the symphysis and rami of the pubes projected forwards and upwards. The measurement of the conjugate diameter did not exceed three-quarters of an inch, or that of the transverse two inches; and having placed my fingers upon each other in the widest part, and having measured them when withdrawn, I concluded that no body of a diameter greater than from three quarters to one inch could pass through it, and that delivery *per vias naturales*, aided by the crotchet, was utterly impracticable. Another important feature in the case was, that no part of the child or os uteri could be felt.

Upon these grounds, then, we concluded that our only resource was the Cæsarean section. Our opinions were now stated to the husband and friends, and they cheerfully submitted to any practice we thought best to adopt. The patient, anxious to have her sufferings terminated, also readily acquiesced in our decision.

An enema was ordered to be administered, and it soon operated. The catheter was also introduced, but little

urine was withdrawn. As the patient felt cold, a little warm wine and water was given, which acted beneficially. Having placed her upon a table, an incision of six inches long was made through the abdominal integuments about one inch to the left of the umbilicus, extending from three inches above to three below. A small opening was made into the peritoneum, and this membrane was afterwards fully divided by a probe-pointed bistoury. The uterus was now exposed, and an excision of equal length was made into this organ, nearly dividing its entire substance. An opening was now made at the lowest point of the wound by the knife, so as to admit the finger, upon which the bistoury was again passed, and the uterus was laid open. I now passed my hand, and, taking hold of the thigh of the child, readily extracted it; but unfortunately it was dead. The funis having been divided, the placental portion was held firmly in the left hand, whilst the right was introduced into the uterus to extract the placenta, which was attached to the upper and posterior part of the uterus. As soon as the placenta was removed, the uterus energetically contracted, and lowering itself became almost invisible. The intestines protruded at the wound, but were soon reduced and retained by the hands extended over their surface. Mr. Morris next passed several ligatures through the abdominal parietes, and afterwards applied slips of adhesive plaster, by which the edges of the wound were closely approximated. Pledgets of lint spread with cerate were also applied, and in order to secure the whole a broad bandage was loosely put on. The quantity of blood lost was trivial, not exceeding three or four ounces, which favourable circumstance doubtless was partly owing to the position of the placenta, and partly to the vigorous contraction of the uterus.

During the whole course of the operation the patient maintained the greatest fortitude, and expressed her thankfulness upon the termination of her sufferings. She, however, as well as all present, were disappointed that the child was lost.

The patient was then put to bed, and, as the pulse was rather low, a cordial was administered, which in a little while revived her. An anodyne draught, con-

taining 60 minims of laudanum, was also given.

At ten o'clock p.m., the pulse was 140; the skin was hot; she was thirsty, and complained of headache; belly tender; discharge not more than usual; thinks she can sleep. No urine passed.

April 2d, 8 o'clock a.m.—Says she has slept; has taken some refreshment; skin hotter; pulse 140 to 150 in the minute, and feels sharp to the finger; has not voided any urine; bowels not moved. Ordered saline effervescing draughts. The catheter to be introduced, by which from three to four ounces of urine were withdrawn.

12 o'clock at noon.—Not so well; had shivering and some vomiting; the pulse was more frequent, and the abdominal tenderness increased; belly swelled; a sanious discharge was oozing from the wound; bandage uncomfortable; vaginal discharge rather greater and more offensive; bowels not moved. The medicines were continued; and the bandage loosened.

4 o'clock p.m.—Has again shivered; continues to vomit; pulse more frequent and tremulous; countenance more depressed; abdomen more tender and more swelled; is very thirsty; and her tongue is very much loaded. The bowels still constipated. The saline medicines were continued, and an enema with oil of turpentine and castor oil was ordered to be administered.

10 o'clock p.m.—Vomiting continues unabated; pulse still very frequent and much weaker; skin colder and rather clammy; is slightly incoherent; belly very tender and much swelled; discharge offensive; has not passed urine; the enema operated. The catheter introduced, and four ounces of urine withdrawn; the bandage still further loosened. To have a little brandy in her gruel; to take 40 minims of laudanum. The symptoms continued to grow more unfavourable during the night, and she died at 4 o'clock this morning, (Tuesday,) about 35 hours after the operation.

An application was made to examine the body, but permission was only granted under a promise that the wound was alone to be inspected; but Mr. Morris while alone took the opportunity of ascertaining, as far as he was able, the state of the parts. The edges of the external wound were quite separate, and had a flabby unhealthy aspect.

Having divided the stitches and drawn aside the integuments, the uterus was observed to be well contracted. The wound was much diminished; its edges were loose and unhealthy. The peritoneum was inflamed, and about from four to six ounces of serum were effused within its cavity. Upon again raising the uterus, the cervix was seen to be dark-coloured; and having divided it, the lower portion and orifice were found in a gangrenous state. The bladder was empty and uninjured. The brim of the pelvis was examined, and found fully as much distorted as I have before mentioned.

REMARKS.—The issue of this case presents indisputable evidence of the serious mischief arising from protracting the operation. Both the life of the mother and the child were most likely forfeited by the delay. How the real character of the case could have been so much overlooked, after the clear and decided opinion of Mr. Wood given at the end of the seventh month, I am at a loss to conceive.

The tumefaction of the external genitals, and the inflamed condition of the vagina, are alone to be attributed to the too frequent examinations made. When a practitioner undertakes to explore for the exact measurements of the brim of a pelvis, deformed like the one belonging to the subject of this case, he is compelled to pass his hand completely into the vagina; and, from an anxiety to accomplish this, and to ascertain the nature of the presentation of the child, he is induced to repeat the operation very often. These repeated examinations are often productive of very serious mischief, causing inflammation, which frequently terminates in suppuration and sloughing. With these circumstances before us, we are of opinion that every unnecessary manœuvre ought to be avoided, and that the practitioner should acquaint himself, as completely as it is possible, with the nature of the case, before he withdraws his hand.

CASE V.—Mary Moxon (Nixon), aged 39, had been married sixteen years, and had been pregnant eight times, in seven of which she reached the full period of gestation, and in one she miscarried once at the fourth month, which happened about thirteen months before her

present pregnancy. The last natural labour took place about four years since, and was so rapid, as to be completed in two to three hours. She had enjoyed good health until about two years ago, when she began to suffer from what she called rheumatism and a short cough. Afterwards she was frequently confined to bed; and her friends observed her to rather diminish in height. The pains in her back and hips increased in violence during her present pregnancy, and her height is now very considerably diminished. She has been employed as an “ender and mender” for the manufacturers, which occupation has obliged her to be sedentary, but has attended to her domestic duties, although unfit.

At one o'clock on Thursday morning, May 24th, 1821, she was apprised of the approach of labour by a discharge of water, which continued to dribble away without pain. At four o'clock, Mrs. Barber, her midwife, was sent for, as she now felt slight pains. On examination *per vaginam* Mrs. B. could neither feel the *os uteri*, nor any part of the child, but ascertained that the pelvis was considerably distorted. At noon she sent for Mr. Wilson,* one of the surgeons of the Manchester Lying-in-Hospital, but he was from home; and instead of immediately applying elsewhere, she allowed several hours to elapse before she sent for other assistance. At eight o'clock P. M., Mr. K. Wood saw the patient, and considered the case of such importance as to induce him to call upon Mr. Wilson, who was then at home, and they immediately went to the house, and reached it at a quarter before nine o'clock. Mr. Wilson agreed in his opinion; and he desired that a general consultation of the medical officers of the institution might be immediately called.

At ten o'clock P. M., when Dr. Hull, Mr. Wilson, Mr. K. Wood, Mr. Lowe, and Dr. Radford had assembled, the state of the patient was as follows. Her pulse was 130; the skin hotter than natural; her tongue was furred; she was very thirsty; her countenance was cheerful. She had passed urine at

* It is with the permission of my respected friend, Mr. Wilson, that I am enabled to publish this case; and I beg to thank him for his great kindness, more especially for his liberality in furnishing me with what few notes he had taken of the case, all of which are in accordance with my own.

several intervals during her labour, and her bowels had responded three times to an enema which her midwife had very judiciously administered. The stools were scanty and of a green colour. The pains, which were reported to have been very frequent during the afternoon, continued so. She complained of great tenderness in the belly, which was considerably increased by pressure. The distance between the pubes and sternum was much shorter than natural. The *fundus uteri* projected very much forwards, and had an inclination to the left side. By an examination *per vaginam*, I found the parts soft, moist, and cool. The sacrum was considerably more incurvated than natural, and the coccyx projected upwards into the cavity of the pelvis. The tuberosities of the ischia approached very near together at the fore part; and the rami of the ischia and pubes approximated so closely together as not to admit a finger to pass between them along any part, except at the middle, at which place there was a small opening, in consequence of a slight bulging outwards of the bone on either side. The pubic arch was destroyed, and only a small chink left, by which the depth of the pelvis was increased at the anterior part. In order to examine the brim, I passed my hand, but was compelled to carry it very much backwards. The pubes on each side formed a very acute angle at their fore part, and then running forwards nearly parallel to the symphysis, having a slit between them which would barely admit the finger edgeways. The base of the sacrum and the last lumbar vertebra had sunk forwards and downwards into the pelvis, and diminished the conjugate diameter on the left side so much, as barely to admit the finger in the position, that when it was withdrawn, it measured three-quarters of an inch, and when placed in other parts of the brim, an inch, as far as could be ascertained, was the fullest latitude which could be given to guide us in our decision. We all agreed that no other means but the Cæsarean section could avail us to deliver this poor creature.

Having decided upon our plan, we stated our opinions to the friends, who readily consented that we should adopt any practice we thought best. When we acquainted the patient with the difficulty of her case, and the operation

necessary to extricate the child, she unhesitatingly acquiesced. It was intended to have used the catheter, but this was unnecessary, as half a pint of urine was discharged by her own efforts.

She was now placed upon a table, and a little brandy and water, with thirty drops of laudanum, was administered her.

Mr. Wilson made a longitudinal incision a little to the left of the umbilicus, six inches in length, extending from three inches above to three inches below this part, and divided the abdominal parietes down to the peritoneum. A small opening was made through this membrane, and it was fully divided by a probe-pointed bistoury passed along with the finger. An incision was now made nearly through the uterus, corresponding in length and direction to the external wound. The probe-pointed bistoury was introduced on the finger through a small opening, and the remaining portion divided. This exposed the child, which lay with its breech towards the opening. Mr. K. Wood seized the child by one thigh, and the body was extracted with the greatest ease, until the shoulders came to pass, when the uterus suddenly and powerfully contracted, and grasped the child's neck and left arm so strongly, that this gentleman could not liberate it, although he used great force in extraction. He then gradually passed his hand along the body of the child into the uterus, and having dilated the structure, the child was extracted. It would have been easier to have torn away the uterus from its connections, than to have brought the child away by direct extractive force. The fundus and body of the uterus felt very hard. The child was vigorously alive when first taken hold of, but, from the length of time occupied in extracting the head, it became so enfeebled as to show only slight signs of life. I very diligently employed every means to resuscitate it, and continued them for at least three-quarters of an hour, but was ultimately unsuccessful. This was a most appalling affair. After dividing the funis, the placental extremity was firmly held with one hand, whilst the other was introduced into the cavity of the uterus, for the purpose of removing the placenta, which was already detached, and lying loose. The uterus then immediately fully contracted.

The intestines, which appeared at the wound, were replaced and retained by the extended hand: the edges of the wound were then brought together by ligatures, supported by slips of adhesive plaster and an extended bandage.

Very little blood was lost during the operation, a small branch of the epigastric only being divided. Its bleeding was restrained by the pressure of the finger.

The patient felt faint whilst on the table, but was soon recruited by taking a little brandy and water. When all was adjusted, she was carried to bed, and said she was quite as comfortable as she could possibly expect. The pulse now beat about 136 in the minute, and was distinct. The heat of the skin was not much above natural. In half an hour afterwards she felt a distressing sensation at the chest; her heart beat quickly, and the breathing became very much hurried; her skin grew cold, and the vaginal discharge was increased, but still not in such quantity as to create alarm. Thirty drops of laudanum in a little brandy and water were immediately administered, and in half an hour forty drops more. In a very short time all these symptoms subsided, and she felt as well and as warm as before. All stimulants were now prohibited, and the antiphlogistic regimen recommended, and she was left for the night in the charge of Mr. Hunt, at that time a pupil of Mr. Wilson's.

Friday, May 25, 7 o'clock A. M.—Present, Dr. Hull, Mr. Wilson, Mr. K. Wood, and Dr. Radford. She experienced no further palpitation of the heart; slept tolerably well; the pulse was 131; respiration easy; skin rather hot; belly feels comfortable and not swelled. To take a saline effervescent draught every three hours, and an ounce of the almond mixture with five drops of laudanum in the intervals.

12 o'clock noon.—Present, Mr. Wilson, Mr. Hudson, Mr. K. Wood, and Dr. Radford. The heart appeared to jerk; pulse 130, and quite distinct; skin hotter; her countenance more anxious; tongue furred, but moist; has again slept; urine passed twice. The medicines were continued.

4 o'clock P. M.—Present, Mr. Wood, Mr. Wilson, Mr. K. Wood, and Dr. Radford. Belly rather tense; pulse 130, and firmer; tongue dry and furred; is thirsty; has passed urine; her cough

is still troublesome; the bowels are constipated. A solution of Epsom salts in infusion of roses was directed to be given, until it operated, and a linctus for the cough was ordered.

6 o'clock P. M.—Present, Dr. Hull, Mr. Wilson, and Dr. Radford. Her countenance looked better; the heart throbbed violently; her pulse beat 125; the tongue was rather more moist and soft; the belly continued very tense; and the respiration was hurried; she has had slight vomiting, and her bowels have not yet been moved. The medicines were continued.

10 o'clock P. M.—Present, Mr. Wilson, Mr. Lowe, and Dr. Radford. Her countenance has become more anxious; her respiration is more laborious, and she has again vomited. The skin is hotter; her belly is very tender, and is much swelled; her pulse is 130; the vaginal discharge trifling, and very slightly coloured; she has a tendency to dose; has had several foetid liquid stools.

To omit the aperient, but to continue the other medicine; the bandage to be loosened.

26th, Saturday, 8 o'clock A. M.—Present, Mr. Wood, Mr. Wilson, Mr. K. Wood, and Dr. Radford. Has frequently vomited a brown slimy fluid; her pulse is 130; her respiration still laborious; the belly rather softer; her skin is still hot; and the lochial discharge very trifling.

10 o'clock A. M.—Present, Dr. Hull, Mr. Wilson, and Dr. Radford. Pulse 134; vomiting has ceased.

1 o'clock P. M.—Present, Mr. Wood, Mr. Wilson, and Dr. Radford. Her hands feel cold; the pulse is 130; her mind is clear; the vomiting has ceased; lochial discharge fetid and more profuse; and there has been a thin and offensive sanious discharge from the wound.

5 o'clock P. M.—Symptoms still grow worse.

10 o'clock P. M.—Mr. Wood, Mr. K. Wood, and Dr. Radford, present. The symptoms continue to become more unfavourable.

Sunday, 8 o'clock A. M.—Pulse 140, and very weak; the skin is rather cold and covered with a slight clammy sweat; her countenance is very anxious; and there is great swelling and tenderness of the belly; the lochial discharge is very offensive; she has not passed urine. The lowest strap of adhesive plaster be-

ing removed, the wound appeared in an unhealthy state and not united; a great discharge took place, which was very offensive. During this day (Sunday) she was visited several times, and found still further sinking. At six o'clock in the evening she expired, having lived sixty-seven hours and a half after the operation.

REMARKS.—It may appear strange that no notice was taken of this poor woman's case at an earlier period of pregnancy, as she was a patient of the Lying-in Hospital. But our hospital extends its aid only to poor women at their own houses; and this poor creature having obtained a note of recommendation from a subscriber, was admitted, the medical officers having no knowledge that such a case was on the books. Another unfortunate circumstance was the midwife omitting to send for other surgical assistance in the absence of Mr. Wilson, thereby allowing several valuable hours to elapse.

The violent contraction of the uterus, by which the head and left arm of the child were seized after the extraction of the trunk and lower extremities, forms a remarkable feature in the case. The placenta was found detached and lying loose in the cavity of the uterus; and how far this violent contraction depended upon this circumstance is difficult to say. In natural labour, we well know that, as soon as the placenta is detached, the energies of the fundus and body of the uterus are aroused, and contraction follows, and is continued until this mass is expelled. In the preceding case of Cæsarean operation, the uterus was quiescent until the placenta was detached by the hand, when contraction instantaneously followed.

[To be continued.]

ROYAL COLLEGE OF SURGEONS.

GENTLEMEN admitted members on the 11th inst.:—Messrs. J. Chapman—J. F. Elsom—J. Merryweather—W. A. Dobbyn—G. C. Millar—H. J. Wilkin—S. Martyn—A. C. C. De Renzy—C. Bringlee—J. F. Vivian—P. Dillon—and F. Day.

Admitted on the 14th inst.:—Messrs. H. T. L. Byne—J. S. Hichens—F. M. Smith—C. Breeze—S. W. Jones—D. W. Paghe—R. T. Gagen—H. T. Shaw—J. J. Ritchie—C. O. Regan—and J. Baines.

ON THE PHYSICAL DIAGNOSIS OF DISEASES OF THE ABDOMEN.

BY EDWARD BALLARD, M.D.

Late Physician to the St. Pancras Royal General Dispensary, &c.

Introductory Remarks—Regional limits of the Abdomen—Inspection—mode of inspecting the abdomen—results of inspection in health physical signs derived from inspection in disease.

It will be my endeavour in this and the following papers to present to the reader, in as brief a form as the subject admits of, a systematic account of the physical phenomena presented by the abdomen in health and disease. The earlier papers will be occupied by a general consideration of the results of each mode of physical examination in health, appended to which will be an enumeration of the modifications which disease is capable of introducing: the succeeding communications will contain the special application of physical diagnosis to the most important diseases of this region.

Sight, touch, and hearing, are the senses through which our mind becomes cognizant of the physical condition of any portion of the body. The modes of examination, then, will resolve themselves, first, into that by *inspection*, assisted by artificial means of rendering its results accurate, the several methods of *measurement*; secondly, that by *palpation*; and, thirdly, that by *auscultation*, assisted by an artificial mode of eliciting sound, *percussion*. We are all familiar with these modes of examination as applied to the chest, but in regard to the abdomen they are not uncommonly either altogether neglected as means of acquiring information touching disease in that region, or used in so slovenly and inaccurate a manner as to lead as often to erroneous as to correct conclusions. But although each method of examination is common to thoracic and abdominal exploration, yet each is not in an equal degree applicable to both. The reason of this is, the different character of the enclosing structures in either region. The organs of the thorax are boxed up within walls which, though not entirely unyielding, are sufficiently so to prevent any

handling of the parts within; and the same structure places a limit on the indications which the exterior can give of changes which are wrought in them by disease. The lax and soft tissues, however, of which a great part of the abdominal parietes is made up, yield readily to the pressure of the hand, so that with their mediation it can perceive the size, form, and consistence of many contained parts, and changes in bulk which may chance to occur in these readily become perceptible to the eye by elevation, or falling in of the superjacent wall. Nor can it be said that the thorax has any advantage over the abdomen in the value of the results of percussion, although at present the art of auscultation furnishes the physician with more numerous indications of disease in the former than it has yet been made to supply in the case of the latter region.

Regional limits of the abdomen.—The upward anatomical limit of the abdomen is the arch of the diaphragm; below, it is commonly said to be bounded by the rim of the true pelvis. In disease, however, we are continually reminded of the very artificial nature of this lower boundary line. Organs which in health occupy solely the pelvis, rise in disease above the level of its rim, and take a place among the viscera proper to the abdomen; while, on the other hand, not only are healthy abdominal structures prolonged into the pelvis—as for instance the intestine and peritoneum,—but products of disease gravitate there, and morbid changes, originating in the one, influence the condition of the other cavity, just as if there were really no distinction between them. In fact, when morbid phenomena are under consideration, limitations which the mere anatomist finds it convenient to make must give way to boundaries which nature herself has established, and all must be regarded as abdominal organs, and all that as belonging to the abdomen, whatever its structure and wherever placed, which is covered by its serous membrane, the peritoneum. The strict lower limit of the abdomen, then, is so much of the pelvis and its organs as the peritoneum lines and covers; above, the arch of the diaphragm is the limit, on the upper surface of which lie the lungs and heart, separated from it by the sacs of the pleura and pericardium. The summit of the diaphragmatic

arch reaches on the right side the level of the fourth intercostal space; on the left side it only attains that of the fifth rib. On the surface, however, the line which marks the upward limit of the abdomen and the lower limit of the true chest, that which corresponds with the separation of the diaphragm from the thoracic wall, and with the reflection of the serous membranes of the pleuræ or pericardium upon it, passes from the lower extremity of the sternum almost horizontally to the right (at first a little downwards), “across the conjoined cartilages of the sixth and seventh ribs, then behind the fifth intercostal space,” and thence backwards to the junction of the twelfth rib with the vertebra. This line on the left side takes at first a little lower level, but ultimately attains the corresponding point posteriorly. But as, in some diseases of the chest, the lower limit of this region may be depressed below the natural level by the yielding of soft tissues in that direction, so, in some diseases of the abdomen, its upper limit may encroach more or less seriously on the space allotted to the thoracic viscera, by the yielding of the diaphragm and spongy lungs to the pressure from below. In the other direction, increased space is sometimes gained by compression of the bladder, by depression of the uterus towards the outlet of the pelvis, and by a bulging into its canal or towards the vulva of the vaginal wall. Hence it happens that the physical signs of abdominal disease are not confined to those parts which are included in the limits of the healthy abdomen, nor indeed to the truly abdominal organs alone, but must be sought also by examination directed to the chest and its organs, on the one hand, and to the pelvis and its organs on the other.

Inspection.

The information which inspection affords us has relation to *size, form, and motion*.

Mode of inspecting the abdomen.—In accordance with my former remarks, inspection must take in simultaneously the abdomen and the chest. Both must, of course, be uncovered and exposed in a good light, the subject being protected from cold by a previous regulation of the temperature of the room. This is essential, not only for the benefit

of the person examined, but because a sensation of chilliness is incompatible with that perfect rest which it is desirable that the abdominal and thoracic muscles should maintain during the period of inspection. The position of the subject may be either the erect or supine. In disease the latter is often the only available one; but when possible, the erect posture is often to be preferred. Whichever posture is selected, the arms should hang or lie loosely by the side; the subject stand on a level surface, or lie upon an elastic but moderately resistant mattress; the carriage of the head should be unconstrained, or, if lying, it should be supported at the same angle with the trunk as it holds in the erect position. Above all, the physician must not allow the examined to take the place of the examiner; his eyes must be kept directed to some object, either in front of him, or, if he be lying, to the ceiling. An infringement of this rule is often fatal to the accuracy of either inspection or measurement; for, almost involuntarily, some of the muscles will be thrown into activity, or the natural movements be disturbed, when the person directs his attention to them.

Inspection may be made from the front, from behind, and from the sides; sometimes, also, much information is gained in disease by inspecting the patient in several positions,—as standing, or lying upon the back, and upon the sides.

The results of inspection may be referred to two classes—viz., those which relate to the size and form of the exterior, and those which relate to its movements.

Results of Inspection in Health.

1. The general outline of the abdomen is gently convex; but the surface indicates, by various elevations and depressions, the position of the several tissues which constitute its parietes, and, in some cases, of the organs over which they lie. Viewing it from the front, the upper superficial limit of the abdomen, which has been described, is indicated by a depression corresponding with the lower end of the sternum, and passing outwards across the conjoined cartilages of the sixth and seventh ribs, and the fifth intercostal space on either side,—rather lower, as has been said, on the left side than on the right.

Tracing the lateral outline of the thorax below this line, it is seen to form a bulging curve downwards, the fullest part being nearer the upper than the lower part of the bulge. This bulging is more marked, for the most part, on the right side than on the left, corresponding, in the former case, with the position of the liver, and, in the latter, with that of the stomach and spleen. The prominence on the left side will vary with the varying states of fulness of the stomach with alimentary or gaseous matters. There is rarely, unless the subject be fat, or the wall infiltrated with serum, any difficulty in perceiving the outline of the lower margin of the framework of the thorax by the change in tension of the wall in passing from this to the part bounded by the laxer substance of the muscles and aponeuroses of the abdomen. Below the margin of the thorax the elevations and depressions of the wall correspond with the position and anatomical peculiarities of its muscular element, and in some degree, also, with the position of subjacent viscera. These markings should be well impressed upon the mind. From the navel downwards to the pubic symphysis the abdomen presents an even convexity, which extends laterally to that part which corresponds with the situation of the lineæ semilunares of the abdominal aponeurosis. Above the navel, however, corresponding with the lineæ alba, is a shallow depression, best marked at the upper part, and opposite the ensiform cartilage. On each side of this the recti abdominis muscles elevate the surface, but are crossed by transverse shallow depressions, corresponding with their tendinous intersections: the uppermost of these is the least obvious; the lowermost, crossing the muscles just above the navel, is the broadest. External to the recti, and a little internal to the vertical line of the nipples, there is a depression, commencing broad at the margin of the cartilages of the ribs, and running downwards in the direction of the lineæ semilunares, becoming narrower and more shallow below the level of the navel. Exterior to this there is, again, some fulness corresponding with the muscular portion of the broad muscles of the abdomen. The situation of the cristæ ilii, unless in emaciated subjects or in cases of inanition, is marked by a groove, above which the wall bulges out into an elevation of an oval form,

which passes downwards and inwards to the linea semilunares, terminating about the upper part of Poupart's ligament. Viewing the trunk from behind, we see, external to the fulness which marks the commencement of the fleshy mass of the erector spinæ, a shallow depression, corresponding with the extremity of the twelfth rib. The lateral view of the abdomen affords a profile corresponding with the above description of the form of the region. It enables us, however, to form a better idea of the antero-posterior diameter of this part of the trunk, as the anterior or posterior inspection does of its lateral width.

These results of inspection vary, however, with age, sex, habits, the condition of the wall, and the varying state of subjacent organs. *Age*: in youth, in proportion to the nearness to childhood, the size and prominence of the abdomen from the bulk of its contained organs will be greater, while the muscular prominences and depressions will be less strongly marked; the depression marking the upper limit of the abdomen will be lower, and from it downwards the bulge of the lower ribs will be greater, and they and their cartilages will project more externally. *Sex*: in the female a modification arises from the lower degree of the muscular development, and from the greater width of the alæ of the pelvis. The compressing influence of the stays, worn more or less tightly by almost all females, contracts the natural bulge of the lower ribs, and renders them more acute at the angle of the epigastrium, while the lower border of the ribs and their cartilages are forced outwards by the pressure of the displaced organs. This displacement has its influence, also, in modifying the natural depressions of the abdominal wall. *Habits*: in the sedentary the abdomen is fuller in comparison with the chest than in those who undergo active labour; the chest is lengthened as its breadth is diminished, and the angle of the epigastrium is more acute. *Condition of the wall*: fatness and serous infiltration often destroy all traces of the natural markings; the latter, especially, may cause some deception, from its limitation or modification arising from the pressure exercised, and the displacement of the fluid effected by the waistband of the trousers or other articles of dress, as well as by its gravita-

tion to either side, or to whatever may be the depending part. *The varying state of subjacent organs*: this may be exemplified by the instance of the stomach, which, when distended, has its great curvature directed forwards, pressing outwards the costal cartilages and the left lobe of the liver, behind which it lies, and causing that side to be fuller and more prominent than in the empty state of the organ.

2. The expansion of the chest in inspiration is effected not only by the movements of the ribs, but also, and principally, in ordinary breathing, by the descent by contraction and flattening of the diaphragm, which, pushing downwards the underlying organs, causes a protrusion to a corresponding extent of the abdominal walls anteriorly and laterally, which is very evident to the eye. There is also visible a descent of the depression marking the lower limit of the true thorax. In persons whose chests are not covered with much fat we may sometimes see also the spot of the impulse of the apex of the heart in the fifth intercostal space disappearing or becoming faint on an inspiration being taken. In thin persons occasionally a slight movement is visible below the ensiform cartilage, and where, in addition, the curve of the lumbar region is considerable, occasionally some pulsation also above the navel. The acts of inspiration and expiration are of about equal length.

Physical Signs derived from Inspection in Disease.

1. *Enlargement*.—This may be general or partial; the latter passing under the various terms of *fulness*, *bulging*, *elevations*, &c.

A. General abdominal enlargement is often preceded by one of the partial enlargements, of which it appears to be the development and sequel; but in other cases this is not observed, the whole face of the abdominal wall gradually protruding. In extreme cases there is seen a lateral bulge from the cristæ ilii to some point at the side of the thorax, either at or above the seat of the natural transverse depression. The angle of the epigastrium is considerably widened, and the margin of the lower thoracic cartilages more or less everted. In proportion to the youth of the subject, the sternum is thrown forward, and the apex of the ensiform

cartilage becomes everted. The age of the patient regulates very much the degree to which the walls of the thorax yield to pressure from below. In the child they readily give way, so that the trunk assumes almost a fusiform shape; in the aged, on the other hand, the ossification of the cartilages opposes this, and the thoracic part of the enlargement is at its minimum. Anteriorly, the enlargement is evenly rounded, sometimes in the erect posture, the upper part being a little more flattened than the rest. Posteriorly, the surface outside the erector spinæ partakes of the general fulness. Even the inferior boundary of the pelvis may yield, and the perinæum present some prominence.

B. Partial enlargement manifests itself in unnatural fulness, bulging, or elevation of any part of the abdominal parietes,—sometimes merely in effacement of a normal depression. The two sides, which are more or less symmetrical in health, may be compared. Partial enlargement arising from disease in the upper or lower part of the abdominal cavity may ultimately terminate in a general enlargement. In these cases the part in which it commences will often exhibit a predominant fulness. The size and form of the enlargement should be noted, since these, together with its seat, will often lead to the recognition of its cause. Changing the posture of the patient will determine whether the distending cause is influenced by gravitation, or whether the part or organ is immovable. An examination at different times of the day, before and after meals or defecation, will often lead to useful information.

Both general and partial abdominal enlargement may arise from other causes than disease in the abdomen. Empyema, emphysema, or pericardial effusion, may act thus, by depressing the diaphragm, and causing either some general fulness, or merely a local fulness below the margin of the ribs. Extra peritoneal disease of the abdominal wall may also give rise to enlargement. Large depositions of fat beneath the integument, or serous infiltration, together with alterations of form from distortion of the spine, need only ordinary attention to distinguish them from enlargements from abdominal disease.

2. Depression or retraction.

A. General depression or retraction,

in its minor degrees, affects principally the more yielding portions of the abdominal wall, whose profile is then concave in place of being convex. Viewed from the front, the abdomen appears to form a basin, its upper rim being the angle of the epigastrium and margins of the ribs, its lower the pubes, Poupart's ligaments and the spines of the ilia—the crista ilii project, and the lateral wall of the abdomen is incurved. In its highest degree the natural bulges over the lower ribs are flattened, the margins of the ribs are approximated, and thus the angle of the epigastrium is rendered more acute; and there may, in addition, be visible evidence of the presence of the liver far below the margin of the ribs.

B. Partial depression or retraction may occur wherever an organ either diminishes in bulk from disease, or, if hollow, is reduced to an unusually empty condition, the depression appearing over the seat of the diminished part. Unless the natural form of the abdomen be kept in mind, the error of taking the depressed for the healthy portion, and the natural portion for an enlargement, may be committed, especially when the sides are compared. Retraction of the wall from causes acting merely on the muscles may readily be distinguished from that arising from internal disease.

3. *Altered level of the transverse depression marking the upper limit of the abdomen.*

The upper boundary of the bulges of the lower ribs is raised a little in cases of great abdominal distension, corresponding with the altered level of the liver on the one side, and of the stomach and spleen on the other. In cases where thoracic disease—as emphysema—depresses these organs, it is said that there may be formed in young subjects a new but slight depression marking the new upper boundary. The original depressions may remain more or less obvious, according to the age of the patient.

4. *Altered angle formed by the opposed cartilages of the lower ribs.*

In cases of either general abdominal enlargement, or where the organs occupying the upper part of the cavity are increased in bulk, this angle is increased; and in the opposite condition,

of abdominal retraction, it is rendered more acute.

5. *Altered position of the umbilicus.*

In the healthy subject, a line drawn horizontally between the highest points of the two *cristæ ilii* crosses the umbilicus in the middle line. It is nearer to the pubic symphysis than to the base of the ensiform cartilage or bottom of the sternum. In some diseases producing enlargement, the height of the navel is manifestly altered, and it is noticed to be either further from the bottom of the sternum than in health, or proportionally nearer to it. This has often indicated to me the seat of the original disease; for, where it has occupied the upper part of the cavity, the distance of the navel from the bottom of the sternum has been greater than the natural proportion, whereas, in cases where disease has originated below, I have seen the natural proportion of its distance between this point and the pubes actually reversed. This is more likely to occur when, by adhesion below the navel, a tumour in this situation causes the wall of the abdomen to rise with it. In cases of general enlargement the wall above the navel has appeared the most disposed to yield in length.

6. *Altered appearance of the umbilicus.*

The natural appearance of this fold does not require description. In disease (a) the depth of its *depression* may be lessened, (b) there may be greater or less *prominence*, or (c) its circumference may be increased and its *surface flattened out* to the general level of the abdominal wall: (d) the *depression* may be increased.

7. *Venous enlargements*

occur where return of blood by the large veins of the abdomen is seriously obstructed. In the slighter degrees it is seen only in the abdominal superficial veins descending to the groin; but, in its highest degrees, as where the vena cava and vena portæ are both obstructed, veins as large as a finger may be seen anastomosing over the whole abdomen, some of them appearing to pass into the cavities of the trunk through the intercostal spaces and axillæ. In these extreme cases the superficial veins of the lower extremities may likewise be distended.

In addition to these signs of disease, there are others arising from abnormal movements as perceived by the eye:—

1. *Defective abdominal respiratory movement.*—a. This may be *general*, affecting not only the forward and lateral movement of the abdominal soft wall, but also the expansion of the lower ribs. These movements are sometimes quite inappreciable to the unassisted eye. This arrest of abdominal expansion is constantly accompanied by a proportional increased expansion of the upper ribs. b. It may be *partial*, occurring at any portion of the wall. The whole or a part of one side may be thus restrained; and, as in general defective motion, there is an exaggeration of the movement of the upper ribs, most marked upon the opposite side. Defective movements unnoticed during ordinary breathing become very obvious where an inspiration is forced. The cause of this defective movement may be either the defective or impeded descent of the diaphragm, or a muscular obstacle placed to the expansion of a part or the whole of the soft wall, when motion over a diseased part is productive of pain. This is not a sign peculiar to internal abdominal disease; besides such painful affections of the wall as rheumatism, inflammatory affections of the serous surfaces above the diaphragm, and paralysis of the muscle, have a similar effect. Exaggerated abdominal movement occurs only as a sign of *thoracic* disease.

2. *Defective descent of the depression marking the boundary* of the chest and abdomen on deep inspection, is observed where the diaphragm itself is restrained in its descent.

3. *Exaggerated respiratory movement of the sternal ribs** has been already alluded to in connection with defective abdominal movement.

4. *Defective respiratory movement of the sternal ribs* may occur on one side, from pressure made by a diaphragm raised by enlargement of the liver or distension of the stomach. In these cases the corresponding diaphragmatic movements are also restrained.

5. *Altered rhythm of respiration.*—There is only one disease external to

* Dr. Sibson has arranged the ribs into three groups:—1st, the *sternal*, from the 1st to the 5th inclusive; 2dly, the *diaphragmatic*, from the 9th to the 12th inclusive; and 3dly, the *intermediate*, which are the 6th, 7th, and 8th.

the thorax in which this occurs, and that is peritonitis. Here the expiratory act is shorter than the inspiratory (Sibson).

6. *Altered visible seat of heart's impulse*.—Where, in thin subjects, the diaphragm is raised by pressure from below, the impulse of the heart's apex may occasionally be seen higher than ordinary, and more to the left.

7. *Pulsation* is visible between the navel and ensiform cartilage in cases of extreme abdominal retraction: when occurring only below the ensiform cartilage, it may be due to the action of the heart; below this, pulsation is due to disorder within the abdomen.

8. *Vermicular movement*, or alternating elevation and depression of portions of the soft wall of the abdomen, corresponding with the peristaltic movements of the intestines. This may occasionally be seen where the parietes are thin and relaxed, independently of disease.

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DESCRIPTION OF
NEW PREPARATIONS OF GOLD
FOR STOPPING CARIOUS TEETH,
AND OF THE MANNER OF USING THEM.

BY JOHN TOMES, F.R.S.

Surgeon-Dentist to the Middlesex Hospital.

IF the various operations performed by the dentist were compared, with a view to ascertain the relative value of each, it is probable that the stopping of carious teeth would be placed first on the list. A tooth skilfully plugged under favourable circumstances, is, in point of durability and usefulness, scarcely inferior to one that has not been stopped, or to the tooth had it not been attacked with caries, and needed plugging. Indeed, a tooth which has been well plugged before disease had too far reduced its substance, is in effect restored to the condition of a sound and healthy organ.

If inquiry be made of those who have been accustomed to attend to their teeth, and are somewhat advanced in years, many instances may be found of teeth which have been stopped twenty, thirty, and even forty years; but teeth which began to decay, and yet have remained useful for such lengthened periods

without having been plugged, will not be found.

The knowledge of these facts has for many years past led dentists to pay great attention both to the performance of the operation, and to the material most suitable for stopping teeth; and the results of individual experience have been from time to time published.

It may, I think, be safely said that all experienced dentists regard gold as by far the best material for filling teeth, and deprecate the use of any substitute when that metal can be effectively used.

The gold has been used in the form of foil reduced from plate by hammering to suitable degrees of thickness; and in the preparation of this great care and expense have been bestowed. The superiority of gold over all other substances has for a long time been acknowledged; but there are many difficulties in its use, and these require considerable practice and skill to overcome. The gold may be good, and the case favourable; yet, in the absence of dexterity in the operator, the filling may be, and frequently is, defective. Neither will this appear astonishing when the conditions which constitute a good plug are considered in connection with the position of the teeth, and the parts of these which may require plugging. A perfectly successful plug is a solid mass of gold, fitting perfectly the cavity in the faulty tooth. Hitherto, gold-foil has alone been used. This is introduced into the cavity in various forms,—in long strips folded up and down from the top to the bottom of the cavity; in small masses, introduced one after the other; or in small carefully-made cylinders. Whichever method is practised, great care is taken to press the gold against the sides of the cavity in the process of filling, as pressure on the surface of the plug condenses the gold only for a very short distance below the surface. If, for instance, the masticating surface of a molar tooth which has a large hole in it be plugged with gold foil, forced in from the surface, and pressed only towards the bottom of the cavity, it will be found, on removing the tooth, that the gold near the surface has been compressed into a hard scale, while that occupying the bottom of the cavity is porous, and admits of further compression. Hence it has been found necessary to pack in the gold, and in the steps

of the process to compress it against the sides of the cavity. When the cavity has been in this manner filled, wedge-shaped instruments are forced into the gold, and as room is thus made more of the metal is added, until the instrument can no longer be made to enter the plug. Then the surface of the plug is compressed forcibly with the plugging instrument, the superfluous gold is filed away, and the surface of the plug polished. Now, if the operation has been conducted in the best possible manner, and the gold used unexceptionable, the plug will be a perfectly solid mass; the foil will have become cold welded. This result has been obtained, and is, perhaps, not very unfrequently obtained by most good operators: but the result would be much more constant if the gold foil having the welding property could at all times be obtained, and the cavities of diseased teeth were favourably situated for applying the requisite amount of compression. We cannot, however, choose the situation of the cavities; we must treat them in whatever position they occur. But something can be, and, I believe, I may safely say has been, done towards the improvement in gold. A gold has been produced, which, under the pressure of the plugging instrument, welds with the greatest readiness into a solid mass capable of being rolled into plates or drawn into wire.

Platinum is obtained in a spongy condition, is heated, and then compressed in a solid mass: it, in fact, welds as wrought iron does when hammered at a white or welding heat, as it is called. The new preparation of gold may with propriety be called spongy gold, from its close resemblance, as regards condition, to spongy platinum. But the gold welds under pressure without the aid of heat.

In 1825, Mr. Caudius Ash obtained a precipitate of gold by using copper, which he thought would do for stopping teeth. He tried it, and did not find that it answered his expectation. The idea was abandoned without further effort. Had he continued his experiments, it is probable he might have obtained a result which would have encouraged him to proceed; and, judging from the success which has attended his untiring efforts in the improvement of mineral teeth, it can scarcely be doubted but that he would have produced a gold

similar to that which has recently been presented.

Some months since, a Parisian dentist, on his return through London from a visit to America, brought with him two or three teeth plugged with spongy gold. He called on several dentists—myself amongst the number—and exhibited the stopped teeth. This gentleman also called on Mr. Ash, and offered to sell him the secret of preparing the gold, with directions for its use, both of which he had learned in America. While negotiations were going on, the method of preparation was sold to a dentist for a large sum, and the conditions of sale were considerably raised to Mr. Ash, who then declined the offer.

The purchaser, I am told, found that the gold prepared in accordance with the directions he received did not at all answer his expectations, and he (for the time) abandoned the idea of using it. Mr. Ash, however, recollecting his former experiment, again commenced to work on the subject, and succeeded in producing a preparation of gold which readily welded. Of this he sent me half an ounce. It consisted of a fine brown powder, and of small masses, which readily broke down into powder when pressed lightly. Under the microscope the powder was seen to consist of minute particles of bright metallic gold, in the form of irregular crystals or nodules. Under pressure these minute particles readily unite into a solid mass. Several teeth were plugged, by introducing small balls of the powder and compressing it from the exposed surface of the plug. The results seemed highly satisfactory; but on removing the plug it was found that the welding extended but a short distance from the surface against which the instrument was applied, while the lower part of the plug remained porous, and maintained the brown colour of the powder. This condition indicated a serious imperfection in the method of using the metal, and other plans were tried: teeth were partially filled with the powder, and this was condensed by forcing it towards the circumference of the cavity, thereby forming a solid ring; more powder was then added, and the plug completed. By these means a perfectly solid plug was formed, to which no objection could be made. In practice, however, the use of the powder was attended with considerable difficulty,

even though introduced into the teeth in lumps, in consequence of the great waste. More or less constantly escaped into the mouth before its condensation could be effected. In stopping teeth in the upper jaw the waste was very great. It occurred to me that this difficulty could be overcome by wrapping the gold in foil. The experiment was tried, and the result equalled my expectation. By this method I succeeded in making very perfect plugs, which, when removed, presented a solid uniform mass of metal, perfectly welded, and free from pores.

Still the gold seems to admit of improvement—in fact, requires to be produced in the shape of a sponge instead of a powder, so that the present difficulties of manipulation might be overcome, and the use of gold-foil rendered needless.

In the American Journal of Dental Science for October 1850, the following editorial notice will be found:—

“A new preparation of gold for filling teeth.”—Within the last few weeks several dentists in New York have tested the value of sponge gold, as a substitute for gold-foil, for filling teeth; but to what conclusion they have arrived with regard to it we have not been able to ascertain. We have been informed, however, that some are disposed to think very favourably of it.

“The preparation is of a reddish brown colour, and readily crumbles into a fine powder on being rubbed; but, on being pressed together, it at once becomes a compact mass. A few weeks ago we received from the manufacturer, Dr. Maire, through Dr. G. E. Haws, of New York, a small quantity of it, with a request that we would try it. This we have done; but our experiments have been too limited to enable us to say much with regard to its value. We tried it in the cavity of a dead tooth out of the mouth, and succeeded in making a very solid filling. The surface assumed the colour of gold, and presented a highly polished and beautiful appearance; but, on removing it from the tooth, we found that every other part retained the reddish brown colour of the sponge, with here and there the lustre of a particle of gold. For front teeth this would constitute an insuperable objection. On breaking it, the fractured surfaces had the same appearance. We have also seen two

incisors that were filled with it, which were correspondingly discoloured.

“It may, perhaps, answer a very good purpose for filling the grinding surface of a molar tooth; but, as it crumbles into powder so readily, we should not think it could be employed for filling a small cavity in the approximal surface of any tooth where the aperture between it and the adjoining organ was very narrow. It is possible, however, that some may have discovered a method of introducing it into the cavity of a tooth, of which we are ignorant; and, as our experiments with it have been very limited, we would be glad if some of our brethren of New York, who have given it a thorough trial, would favour us with their opinion with regard to its value.”

The gold here described is probably similar to that prepared by Mr. Ash; but, either from the manner of plugging, or from the quality of the gold, the results seem to have been less satisfactory than those I have obtained. The two subsequent numbers of the journal contain no further information on the subject.

Mr. George, in conversation, told me that he had prepared some spongy gold by making a plate largely alloyed with silver, and then dissolving out the latter metal with nitric acid. In the first experiment he succeeded in producing a gold which formed a good plug; but, in several subsequent trials, he had failed to obtain a similar result.

Some years since I read an account of precipitating gold from its solution by oxalic acid; and, on trying the experiment, found that part of the gold was thrown down in a thin sheet. It did not occur to me at the time to use this for stopping teeth; but, when the spongy gold was talked of, the experiment recurred to me, and I mentioned the circumstance to my friend Mr. Makins, of Kingston, and also showed him the results obtained by Mr. Ash. Mr. Makins and myself were students together at King's College, and colleagues at Middlesex Hospital, he having a short time since held the chemical chair in the school attached to that institution. I knew that, since his retirement from the lectureship, Mr. Makins had been working in metals. At my request he at once undertook to make some researches on the forms in

which gold could be obtained, and the results have been most satisfactory.

Mr. Makins has obtained a soft and malleable gold in two forms—one a thin leaf, another a soft compressible sponge.

The leaf has a frosted appearance, which a microscopic examination shows to arise from the surface being minutely nodulated with here and there irregular, imperfect, crystalline columns, arising to a considerable height from the surface of the leaf. If two of these leaves are pressed together, even with an ivory paper-knife, they cannot be again separated. This gold, introduced into a small cavity, condenses under moderate pressure into a most perfect plug; but, if the cavity be large, it must be introduced in small pieces, and each one compressed before introducing another, much in the same way as in using gold foil, excepting that much less care is required as regards the packing and the direction of the folds of metal; for, with moderate care, the whole may be welded into a compact uniform mass.

The sponge is revealed by the microscope to be a porous mass of bright metallic gold. It may be compressed by the thumb and finger to a third of its bulk, or may be torn into small pieces without exhibiting any tendency to fall into powder. The smaller pieces may again be united into a mass by simply pressing them together in the hand. These are advantages which no other form of gold possesses.

The sponge, if the bulk be not too great, condenses into a compact solid mass, when pressed into the cavity of a tooth with the ordinary plugging instruments, and presents a bright burnished surface where the steel instrument has come in contact with it, and a hard frosted surface when it lies in contact with the surface of the cavity. If the plug be sawn through, the interior will be found to be compact, and the angles formed by dividing a cylindrical mass will be found to be sharp and hard. Such a plug made with gold foil may present a similar appearance; but, commonly, the angles will be much less firm, and the plug will fall into several pieces, corresponding to the portions of foil which were separately introduced.

In estimating the relative value of the new forms of gold for stopping

teeth, as compared with the gold foil in common use, it must be remembered that the latter has a smooth, more or less burnished surface; that such surfaces weld with difficulty, while the former have nodulated surfaces which have not been burnished or subject to pressure, and that they weld readily; that the foil requires very careful packing, both as regards the position of the folds and their size; while the new gold, from the readiness with which it welds, needs no such care.

The properties of the new and old forms of gold may be shown by taking an equal mass of each, and, with a plugging instrument, pressing them upon the surface of a sixpence. Each will assume the form of a plate; but the foil will break up into small fragments and layers when bent and pressed with the finger nail; while the sponge and leaf will present a hard rigid mass, which with force may be broken, but it will not fall into small fragments or break up into layers. Again, if the surfaces of two pieces of the new gold which have been pressed against the coin, be placed in contact, and firmly pressed together, they will adhere—a condition which will not be found to obtain with the pieces of gold foil similarly treated. If the surfaces of the plates of the new gold are highly burnished with the stopping instrument, and are then pressed together, they will adhere, but very imperfectly, if at all.

In giving directions for using the new forms of gold, it will be unnecessary to urge the absolute necessity of removing all the softer dentine from the cavity of the tooth to be plugged, and to again state what should be the form of the cavity for receiving the gold, as these points have been fully dwelt on by many writers, and by myself, when treating on plugging teeth, in my Lectures on Dental Physiology and Surgery; for the form of cavity should be similar, whatever kind of gold be used: it should approach a cylinder as nearly as is practicable; and overhanging edges of enamel should, if possible, be removed.

If the cavity be of moderate size, and shallow (for instance, not more than the sixteenth of an inch in depth), sufficient sponge gold for completing the plug may be taken, and pressed with a plugging instrument into the cavity; it should then

be gradually worked round the circumference of the cavity with an instrument having a small extremity. At first the pressure should be light, but afterwards it should be increased till the plug is consolidated. At this stage of the operation, the plug (if sufficient of the sponge has been taken) will project above the orifice of the cavity. The surface may now be cut or filed away, and the plugging instrument again used. The gold will probably sink a little under the re-application of the instrument, in consequence of the removal of the surface which had become so hard that the pressure had not operated through it. The greater hardness of the surface would seem to indicate that the plug is imperfect, from the unequal density in the different parts. It is not so, however. If a piece of brass (or any other metal, indeed,) be hammered, it will in working be found to be harder near the hammered surface than in the interior. Yet the interior will be harder than if the brass had not been hammered, and it will be hard enough. So with a gold plug, if the surface is the hardest, yet the interior will be hard enough, and to the eye will be perfectly compact. Indeed, the hardest part is in the best position,—that exposed to wear. If the cavity be double the depth I have described, then take half as much of the spongy metal as would serve for its completion, and thoroughly compress it, but with as little burnishing of the surface as possible. The cavity will then be in the position of the one I first described, and may be treated in the subsequent stage of the operation similarly. By adopting this plan a more solid plug is gained than if a sufficient quantity of gold for completing the operation had been introduced at once. This method would not be very effective with gold foil, but with the sponge the welding is so perfect, that there is no chance of the upper part coming out or crumbling to pieces: indeed, it is exceedingly difficult to get a plug made with sponge gold out of its cavity, unless by drilling. In this respect it resembles a plug made with amalgam.

If a cavity be broad and shallow, the further side may be first filled by pressing the gold in that direction, before too much pressure has been applied on the surface of the plug. When the further half has been filled, and vertical wall of gold left, the other half may be filled.

The two halves of the plug will weld, if in making the wall of the first half, the surface has not been burnished.

An equally good plug may be made by introducing a mass of gold sponge, and, after compressing it moderately, making a hole in the centre, and from this compressing the stopping towards the walls of the cavity. By this method the cavity becomes lined with a cup of solid metal, the centre of which can be readily filled, and the plug made sound.

In large angular cavities, such as are sometimes found in the molar teeth, more especially in those of the lower jaw, a good plug may be made by forcing the gold into the angles; thus reducing the cavity to a cylindrical one. The bottom may then be filled to within the tenth of an inch of the surface, and the remaining part completed. With gold foil the filling the angles of a cavity is often troublesome, but with spongy gold it is an easy matter.

When the compressing instrument ceases to take effect,—in fact, when no further consolidation of the metal can be effected,—the plug should project above the edges of the cavity, so that when the surface has been cut or filed away, and further compression is attempted, the plug may not sink below the margins of the cavity.

A sharp wedge-shaped instrument should at this period of the operation be used, and if any parts are found which can be pierced, these should be filled with a little of the leaf gold.

In finishing, all the tool-marks should be removed, the margin of the plug made perfectly level with the surrounding part of the tooth, and with the centre a little elevated. It should, lastly, be brightly burnished.

In using the new forms of gold it is desirable to bear in mind that the surfaces of the metal should be handled as little as possible, otherwise they will become coated with extraneous matter, which will interfere with the welding. Neither should the stock of gold be exposed to the atmosphere. It may be conveniently kept in a wide mouth bottle, which admits of being well corked. Should, however, the metal lose its softness or its welding properties, it may be restored to its former condition by annealing over a spirit lamp.

In selecting the gold for making a plug, I have usually employed the sponge for filling the cavity, and the leaf for

stopping the cavity made by the wedging instrument in the partially completed plug.

The two kinds of gold manufactured by Mr. Makins, may, I believe, be obtained of Mr. Ash, of Broad Street, Golden Square; and I would urge upon dentists the expediency of giving them a fair trial. At present but little has been made; it is therefore probable that with further experience many improvements in the condition of the gold may be made. But should it be shown that better spongy and leaf gold cannot be produced than that with which Mr. Makins has supplied me, even then I think there is great cause for congratulation, for I believe it will be found that better pulgs can be made with these forms, than can, on the average, be made with the gold foil prepared by hammering in the usual manner.

NOTES ON THE STRUCTURE, &c. OF TEETH.

BY C. SPENCE BATE, ESQ.

[Continued from last vol. p. 907.]

Caries.

HAVING glanced through the structure of the tooth as it exists when normally developed, we are gradually led into an examination of the same organ as it exists under a diseased action. This is undertaken the more willingly, since the whole of the foregoing can have but little value in itself, unless it be brought practically to bear with advantage on the remedying of the same organ when an unhealthy action has been set up.

It will be here necessary to take a short review of the several theories which have been respectively advanced by pathologists to account for the gangrenous destruction of the teeth; for to casual observation there is something anomalous in the idea that those organs which resist decomposition longest when life is extinct should be those which will not stand the casualties common to our habits, but often decay and disappear while the number of our years as yet are few.

The theories which have been accepted with the greatest degree of favour by those who have studied the constitution of the teeth, are first, as being oldest, that advanced by Mr. Fox, who pre-

sumed that decay in teeth is a true osseous necrosis, in character similar to that which takes place in other bones of the system, and deriving its origin from a parallel cause—viz., as inflammation of the periosteum induces the separation of the membrane from its connection with the bone, the result of which is caries, so inflammatory action in the pulp cavity will cause a separation of the internal organ from its connection with the dentine of the tooth; thereby the loss of vital action in each case leaves the calcareous tissue capable only of sustaining its organization according to the laws which govern inorganic matter,—in other words, vitality is destroyed, and death of the structure results in its decomposition.

This theory was followed by one advanced by Prof. Bell, who urged that dental gangrene is the result of an inflammation, not of the internal pulp of the tooth, but of the bony tissue itself, which originally becomes diseased from cold or other cause, from the effects of which the dentine, possessing but a very low degree of vital power, is not capable of recovering, and death and decomposition are the consequence.

These two are the most important which have been advanced upon what may be termed the theory of inflammatory action, or decay induced from an internal cause; but those which have succeeded these two have generally been more or less of an external character, and chemical in action. Of these, by far the most original, and of which all the others can but be considered as modifications, is the one advanced by Mr. Robertson of Birmingham, who imagines that caries arises from the decomposition of food lodged in crevices. That which is urged by Mr. Tomes, in his work on the teeth, is a combination of the internal and external,—“that the dentine, from abnormal action, loses its vitality, and, with the loss of vitality, the power of resisting chemical action, and that, consequently, the dead part is, under favouring circumstances, decomposed by the fluids of the mouth.”

It appears to me that those theories which are based upon the health of the dentine are at variance with our practice, which supposes that plugging a tooth will arrest the progress of caries, since, if chemical action only takes place when vitality is destroyed, it must follow necessarily, upon the partial death

of a tooth, that when caries has extended to the limits which marked the extent of cessation of vitality, it must stop, since the remainder of the tooth being still in a healthy condition, precludes a chemical action from going on. But this is contrary to known facts, both in the history of the diseases of the teeth, as well as the laws which regulate chemical affinity.

One thing appears certain, that caries, however produced, ceases only upon the destruction of the whole tooth; thus healthy bone cannot stop decomposition, neither can it preclude chemical action. Instead, therefore, of its being death and subsequent decomposition of a part or the whole of a tooth, it should, I think, be considered as a chemical action, producing destruction of the part, and subsequently the whole of the tooth; and so far my own observations agree with those so carefully made by Mr. Robertson, both in the commencement and progress of the disease, and which led him to his opinion before the structure of the teeth was made known by Retzius, Tomes, Nasmith, and Owen.

I do not disagree with any of the facts stated by Mr. Robertson in propounding his theory, but I do not think that he has discovered the chemical agent which plays the destructive part in the phenomena: in fact, decomposed particles of food are not sufficient in quantity to produce such an agent as is required to destroy such firm tissues.

Mr. Tomes imagines that with our diet sufficient is taken into the mouth to complete all the effects produced: in fact, what may be the substance which chemically acts upon the teeth has not yet been determined, some presuming it to be acids generated in the mouth by dyspepsia, and other gastronomic disarrangement; but this does not universally hold good; for we not unfrequently find that the healthy lose their teeth by caries, while others, who may be great invalids, keep them even under the exaggerated influence of medicine of a strongly deteriorating quality,—the ready answer to which generally is, that such instances are examples of well and perfectly developed teeth, the enamel completely covering the dentine, and so offering no weak spot for the action of the destructive agent.

It is a theory which requires too much for granted to suppose that caries

can only take place when the tissues of the tooth are abnormally developed, as it is only upon the disease having become apparent that we can be made aware of the imperfection in the development; and my own experience leads me to the conviction that caries often takes place in a well-developed structure,—as, for instance, in a crowded state of the teeth of a person of middle age, we can scarcely meet with a single organ which is not rendered more or less discoloured by incipient caries, each inducing, from juxtaposition, disease in a corresponding position of its neighbour. It is scarcely legitimate, for the purpose of theorising, to assume that in every tooth so diseased vitality had previously become extinct, or that the tissue is as abnormally developed in that part which should exactly correspond with a similar position in its neighbour; nor can we suppose that pressure consequent upon the crowded state would cause the loss of vitality, since the development of the structure must have been complete long before such pressure could have been brought into action. And, again, we often perceive that when, under such circumstances, disease has commenced, when not proceeded too far, it may be arrested by the removal of its neighbour, evidently showing that the producing cause, whatever it may be, has ceased to act, which it would not if its action depended upon the vitality of the tooth. Again: in making microscopic sections of the teeth we often meet with abnormally developed dentine perfectly healthy and secure from caries, while other teeth have perished under its influence without exhibiting in their formation any abnormal appearance.

My own conviction, which I have long entertained, and which observation and experience tend to confirm, is, that the immediate cause of caries in the teeth is *commenced* by the lime being removed through the chemical agency of *carbonic acid held in solution by the saliva of the mouth, it being taken up by it during the expiratory process of respiration*.

It may, upon a first impression, create a notion of inquiry as to the reason why the action of carbonic acid should be preferred to that of more powerful acids. I would remark that the one is constant, and the other not; and, moreover, it has been proved that the long-

continued action of carbonic acid is more powerful than the strongest mineral acids.*

Therefore, in such places as between closely pressed teeth and other crevices, saliva is held by capillary attraction. The carbonic acid converts first the small portion of carbonate of lime, which assists in forming the enamel into a bicarbonate, which it carried away in solution; and this causes the enamel to become porous, but which for a time stands by the strength of the crystalline arrangement of the phosphate of lime, but which has lost the power of being a perfectly impermeable barrier, and ceases to preclude the fluids of the mouth from passing through, so as to come into immediate contact with the dentine, where caries, in its true sense, may be said to commence.

If a section of a tooth, under such circumstances, be examined, it will be found, when to the eye the enamel shows but little or no imperfection, the dentine beneath is attacked by confirmed caries; the diseased part being discoloured, and separated from the healthy dentine by a semitransparent line of demarcation (vide fig. 29).

FIG. 29.

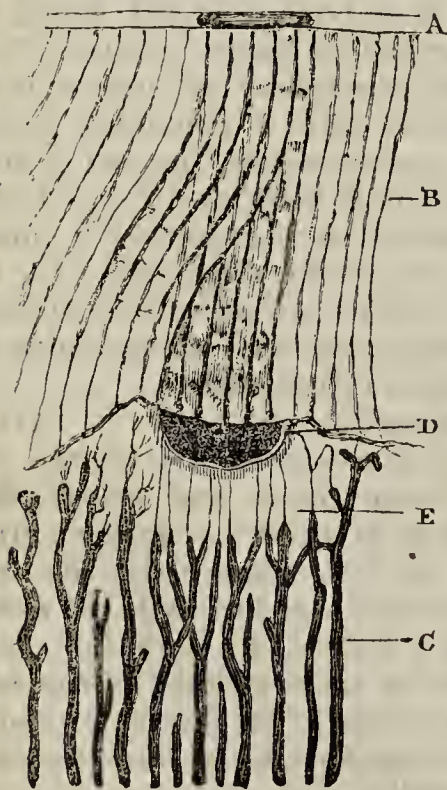


Diagram illustrative of the process of

* Dr. Lyon Playfair stated, at the meeting of the British Association, Birmingham, 1849, during a discussion of a paper on the boring power of marine animals into rocks, that recent experiments of Pollendorff had shown that carbonic acid in long continued action disintegrates rocks much more powerfully than any of the mineral acids, even though boiled with the latter.

caries in the human tooth. *a*, cementum attacked with caries; *b*, enamel, where decomposition is seen to traverse between the prisms; *c*, dentine; *d*, caries commencing in the dentine; *e*, a transparent areola around the gangrenous spot *d*, occasioned by the decomposition and removal of the opaque salts which line the tubuli.

I have said that the *commencement* of caries is the result of carbonic acid in the saliva; but every observer must have noticed the rapidity with which the disease goes on when once it has reached the dentine. The truth is that here a second action is superinduced, which co-operates with the former, and spreads the disease more rapidly.

As soon as the lime is removed from the dentinal tissues, the animal portion being saturated with the fluids of the mouth, decomposes; the decomposition of which generates a certain amount of carbonic acid, which is plus that which is previously in action, and which, therefore, must go on increasing in quantity and force as decomposition of animal matter takes place. Thus caries may be said to generate itself.

I have previously noticed that a semitransparent line marked the boundary between the healthy and diseased tissues. It is this transparent line that I presume Professor Owen has taken to be the new tissue thrown out by nature as a repairing substance, and is figured as such by Mr. Tomes, who terms it a consolidation of the dentine.

If we take a section of healthy dentine, and treat it partially with dilute acid, a similar transparency will be produced, resulting from the obliteration of the opaque salts which line the parietes of the tubuli. Arguing, therefore, from this fact, I presume the transparent demarcation between the diseased and healthy tissues to be produced by the removal of the salts from that portion by chemical agency; the animal tissue not having yet become discoloured, as it at a later period will, by decomposition; and thus establish true caries.

The idea presumed by some, that the acids admitted into the mouth in our artificial diet is quite sufficient to account for every case of decay of the teeth, is at variance with our observations, and facts brought to our knowledge.

Caries is well known to exist in the

teeth of dogs, more especially parlour pets, in pigs, so also in sheep; and Mr. Gordon Cumming mentions his having shot a lion, worn to skin and bone from the pain resulting from a carious canine tooth. So that, whatever objection may be made as to caries resulting from the artificial diet afforded to the two former species of animals, the two latter must remain as insurmountable obstacles to the idea of dietetic acids being the cause which superinduces caries in the teeth.

It must be pure surplusage for me to admit that all such acids must necessarily aggravate disease existing, but my endeavour is to approach as near as possible to the immediate cause of caries, and to do this we must test it by observation under all phases: and here we see that caries will take place both in carnivorous and herbivorous animals, neither of which, probably, ever partook of an acid, or were attacked with dyspepsia, in their existence. Therefore, it appears to me, the notion of acids in diet, together with stomachic affections, as either being the primary cause of caries in the teeth, must be excluded, otherwise than as aggravating agents.

But if we look into the history of the caries in teeth of the sheep, I think a little information may be obtained which may assist towards a correct conclusion.

A figure is given in the paper before the last (fig. 28) of the tooth of a sheep in which normal absorption, induced by the development of a new tooth, is connected with a decayed portion of the tooth above.

Observation of several cases, both of the sheep and pig, has convinced me that this decay is a very common rule; and being so, is induced by the spread of the normal absorption reaching beyond the limits of the soft tissues. Therefore, admitting saliva to the centre of the tooth—that is, bringing dentine into immediate contact with external circumstances. And it appears to me that the cause which removes bony structure beneath the gum and above are the same; the difference of appearance arising by the animal tissue being absorbed in the one, and becoming decomposed in the other; the former being the result of a normal process fulfilling the conditions for which it was originally intended, the other being

the result of an infringement of the laws which govern the structure.

There has frequently been observed on the surfaces of the incisor teeth, in the mouth of individuals who pay not too much attention to cleanliness, a dark greenish appearance, which has, I believe, been universally considered a mucous deposit. But repeated and careful observation has induced me to consider it to be caries of the cementum, the thin membranous tissue, which overlies the enamel; of this I have convinced myself, since if it be not speedily removed it invariably eats into the enamel. This circumstance is opposed to the notion of Mr. Nasmyth, who says the cementum will never decay; as, also, to the observations of Mr. Robertson, that caries never commences except in some crevice or similar place in the tooth.

In another position, and under rather different circumstances, may be seen this same gangrenous destruction of the cementum. Where two teeth approximate very closely to one another laterally, the surfaces of each may often be observed to be discoloured, but which does not extend to any depth into the structure of the tissues.

I am much inclined to believe that caries so commencing, after having progressed to a certain extent, being removed by the friction of a hard brush, to be the true source of those appearances on the teeth, which has given rise to the popular fallacy that camphor in dentifrice destroys the teeth. By this superficial caries the enamel is made friable, and breaks away under the injudicious friction of a desire to remove that which appears so disagreeable to our notions of cleanliness.

Decomposition of the salts having commenced, the process traverses the lines between the enamel prisms, that is, attacking first the walls of each original cell, until it reaches the dentine, when it commences first upon the amorphous salts which line the tubuli, as is apparent by their gradual disappearance, after which the process removes the salts from the intertubular structure, consequent upon which the animal portion remaining dies: this continues the line of decomposition, traversing that of the tubuli, extending also, as it proceeds, until the pulp of the tooth is laid bare to the accidental contingency of external circumstances, which often being unfavourable to the health of

that sensitive organ, superinduces an inflammatory action, which often produces agonizing pain; as well as not unfrequently more serious evils.

Passing by for the present the many inconveniences which arise from a diseased pulp, caries continues its progress upon the calcareous tissues of the tooth, until the whole of the existing structure is broken down, unless it be forcibly removed, a putrid and extraneous body, of which nature endeavours to be rid from the moment that there exists no portion which is capable of being impressed against its antagonist on the opposite jaw,—i. e., from the period when its presence is useless. Sometimes, when left to herself, nature removes these extraneous bodies, but slowly, and it is not uncommon that many such exist for years, to irritate the soft tissues of the mouth, and infect the breath.

To this latter circumstance I would draw the attention of those who watch particularly the origin of epidemic disease, by *suggesting* the possibility that the miasma which induces any prevalent disease may not unfrequently be produced from causes existing within the mouth, for we cannot suppose but that decomposing osseous tissue, together with the pus and decomposition of the soft parts occasioned by their presence, will of themselves evolve carbonic acid, and carburetted hydrogen gases, in such quantities within the mouth, as must carry into the lungs during its constant hourly inspiration a much larger amount than could be inhaled during any temporary exposure to the same gases from other sources.

But whatever may be the diseases developed in the system from such an inducing cause, there are others sufficiently serious, though local in their character, to require the anxious superintendence of those intrusted with them.

MEDICAL EFFICACY OF ANIMAL AND OTHER ORGANIC OILS. BY R. J. GRAVES, M.D.

No more efficacious addition has been made to our list of remedies than cod-liver oil. Its utility has been amply confirmed in my own practice since I wrote specially on the subject in my *Clinical Medicine*; and its virtues are so great as to be almost incredible when we consider its apparently simple nature.

This fact should prevent us from being altogether incredulous when we hear of other organic oils and fats being used with

advantage in certain diseases: thus, in South America many healing virtues are attributed to the oil extracted from the Condor; and, in the United States, the back-woods-men are said to use the oil extracted from the rattle-snake, for the cure of many diseases. To these last I have to add the effects of a broth or decoction made from the common Ray (*Raia elavata*), which is used in the Highlands of Scotland for the cure of scurvy and rickets, and with considerable advantage. The remedy is also popular in Ireland, in the vicinity of Skerries. It is made by boiling down the fish in water until a broth results strong enough to gelatinise on cooling. The patient is bathed in this gelatinous fluid three times a day, and the affected parts are rubbed with the lukewarm melted jelly frequently.

I knew an instance of a child, far gone in rickets, emaciated, with the joints enlarged, and all the symptoms of the disease well marked, who was cured by a tepid bath of sea-water every morning; and, when the skin was dried after the bath, the spine and swollen joints, with all the parts in the immediate vicinity, were well bathed and rubbed with a decoction of the Ray prepared as above.

A young lady whom I attended, and who laboured under some constitutional delicacy, was affected with weakness in her lower extremities, and pains of a wearisome nature in her back, thighs, and legs: she was cured by the same remedy, after various other means which I had used had proved totally inefficacious.

In Fraser's Magazine for November, 1850, there is an interesting paper, "Leaves from the Note-book of a Naturalist," in which is cited a passage from Pliny, as translated in the quaint language of Philemon Holland. The passage is very remarkable, as proving how long the utility of animal oils in serofula has been known. Pliny, speaking of turtles, observes:—"If their flesh be eaten, together with the broth in which they are sodden, it is held very good for to diseuse the king's evil, and to dissipate or resolve the hardness of the swelled spleen."

The naturalist also quotes an old French author, as follows:—"Labat tells us that those who go to the turtle islands, to fish for the green and hawk's-bill turtles, live on the flesh of turtles *only* for three or four months, without bread, without cassava—with nothing, in short, but the fat and lean of the animals; and he declares that, whatever maladies these men may have when they set out upon this expedition, even if they should be affected with the most loathsome, they return perfectly cured."—*Dublin Quarterly Journal*.

MEDICAL GAZETTE.

FRIDAY, JULY 18, 1851.

It is nearly four months since the last resolutions of the College of Surgeons were issued, and we are now approaching the end of the Parliamentary session without any announcement being made respecting medical legislation. There is evidently a great unwillingness among legislators to undertake the task of remodelling our Colleges and Universities, and we fear that the desire of the profession to have a Consolidation Act will not be gratified for a considerable time. There is the probability of a dissolution of Parliament, and with this, the formation of another ministry, the members of which may know and care still less about medical affairs than our present rulers. This is the more unfortunate, since the latest resolutions of the College have, with few exceptions, met with general approbation, and have been regarded as indicating a disposition on the part of that body to meet the wishes of the majority of the profession. What, then, is the cause of the delay? We believe that medical practitioners must, in one sense, cast the blame upon themselves. They have not sufficiently impressed the Home Secretary by memorials, or the House of Commons by petitions, with the conviction that medical legislation is absolutely required; and when those who are to derive benefit from legislation are thus slow to indicate their wishes, it is quite natural that our legislators should consider Medical reform to be a subject which may admit of indefinite postponement.

We lately published a memorial to Sir George Grey, from a meeting of Surgeons in Manchester,* in which these

gentlemen represent their desire for a final settlement of the Medical reform question, so far as surgeons are concerned, on the basis of the resolutions of the College. With the exception of this, and one or two other documents coming from a small number of surgeons, there has been no movement in the profession to induce the Government to act with energy in the matter. The idea of a new College of General Practitioners has been abandoned, and the ground is thus far cleared for legislation; but until the profession generally indicates its wish for an act and charter in conformity with the principles already

Even the Pharmaceutical Bill, on announced, we may look for them in vain. the provisions of which we lately made a few observations, is in a state of suspense. The present proposition is to postpone it until next session, in order that it may in the meantime be well considered.* The result of this will probably be, that it will not be considered at all during the recess,—that it will be brought forward at a late period of the following session, and again postponed in consequence of the urgent pressure of other matters more important to the public interests. All these disappointments might be easily borne if we could only see a limit to them even in the remote future; but the reasons for postponement in one session are found to be equally valid in another, and thus, medical legislation is always kept in sight, but never attained. With regard to the Pharmaceutical Bill, the matter is really so simple that we are at a loss to comprehend on what ground the Home Secretary has recommended that it should be withdrawn for the present session. There is no civilized country excepting England, in which a person may write *druggist* over a shop-door, and dispense medicines without having any know-

ledge of his trade. The public, we contend, are not sufficiently protected by a trial for manslaughter after a fatal mistake has been made; there should be some guarantee, in a business which so seriously affects life and health, that the person carrying it on has received a proper education, and that he has shown himself to be duly qualified by examination. The power of licensing druggists is not at present possessed by any corporate body: it is a matter of indifference to us whether the power be conferred on the Pharmaceutical, or any other Society equally fitted to undertake the duty; but it is quite clear, that some restrictions are imperatively required to regulate the practice of pharmacy.

An attempt has been made to raise a prejudice against the Pharmaceutical bill, by the allegation that it will injuriously affect the interests of the medical profession. The seventeenth clause provides strictly against any interference with the *legal* rights and privileges of *duly licensed* practitioners, in England, Scotland, and Ireland, whether members of Colleges, or of the Society of Apothecaries of London. After the passing of the measure, a medical practitioner will not be allowed to claim an exemption from the penal clauses, if, in addition to his medical qualification, he should take the title of *Chemist and Druggist*, or dispensing Chemist;—or if (we presume) he should act as such, and retail medicines for profit. A medical practitioner may, as heretofore, dispense medicines for patients, but he will not be allowed to keep a druggist's shop, and sell medicines generally to the public. We have no means of knowing whether this usurpation of the druggist-trade by physicians, surgeons, or apothecaries, is very common, but we have no hesitation in stating our opinion that it is degrading to a member of the profession

to act as a retail drug-dealer; and that prescribing by druggists cannot be suppressed until physicians or surgeons have abandoned a business for which they have not been educated. In fact, the dealing in drugs by a medical practitioner is not warranted by his license to practise medicine; and even admitting the new bill to be in some respects an intrusion on the "art and mystery of an apothecary," it is clearly intended by those who have framed it, that the apothecary shall retain all his legal privileges intact. The Apothecaries' license does not confer on the holder the privilege of setting up in trade as a chemist and druggist, and whoever has thus knowingly departed from the terms of his license, must be subjected to such rules as the public good may render necessary for the regulation of the trade.

A DISCUSSION took place in the House of Commons on Tuesday last, in reference to the propriety of making annual grants of money for the support of certain hospitals in Dublin. The discontinuance of these grants had been recommended by a Parliamentary Committee, and the feeling of members was so far in favour of this view, that the proposition to continue them was rejected by a majority of 63,—the numbers for and against being respectively 43 and 106.

The Chancellor of the Exchequer stated that "it was not true that the whole of them had been stopped, and in the grants to the Richmond and Hardwicke Hospitals, which were the main schools of medicine in Dublin, there had been no diminution. He should be sorry that, for the sake of a small grant, the schools of medicine in Dublin should be allowed to fall into decay; and this, perhaps, formed a ground why the case of some other of the hospitals should be considered.

The House must remember, however, that there were no similar grants to the hospitals of this country; and, as far as the majority of them was concerned, he saw no reason for differing from the opinion of the committee."

When the case of the other Dublin Hospitals is considered, we trust that some of the English and Scotch Schools of Medicine and Hospitals will come in for a share of the public money. All that is wanted is "justice to England and Scotland." Either support equally in the three kingdoms, Hospitals and Schools which really require grants, or abandon the principle of supporting such institutions in any one country.

Mr. Grogan, an Irish member, observed,—“If those grants were withdrawn, one of two alternatives must occur, either the hospitals must be closed, and the medical schools be destroyed, or the citizens of Dublin must themselves maintain them; and when it was considered that not 50 per cent. of the patients were in any way connected with Dublin, that was a hardship which they ought not to be called upon to bear.”

We would just ask Mr. Grogan to consider how the London, the Middlesex, Charing Cross, and the New St. Mary's Hospitals are supported. The citizens of London maintain them, and why should our Government take away from the citizens of Dublin, by annual grants of the public money, the opportunity of following the noble example which is thus set to them by the inhabitants of London, not merely to support their own sick, but the sick from all parts of England?

This is certainly a new and singular method of carrying out the system of "protection." The English citizen, who pays one-tenth of the whole revenue of the United Kingdom in the form of Income-tax, is expected by Mr. Grogan

not only to support his own charitable institutions, but to pay for the support of other charitable institutions in a country where the Income tax is unknown! In many of our Schools of Medicine the Professors do not receive sufficient to pay their expenses, and in very few instances can it be said that they receive a fair remuneration for their labours: we trust, therefore, we shall hear no more of these one-sided propositions to support institutions which ought to find the means of supporting themselves.

Reviews.

On the Threatenings of Apoplexy and Paralysis; Spinal Syncope; Hidden Seizures; the Resultant Mania, &c. By MARSHALL HALL, M.D.; being the Croonian Lectures delivered at the Royal College of Physicians, in March 1851. Pamph. 8vo. pp. 90. London: Longmans. 1851.

IN exact relation with the precision of our diagnosis, will most assuredly be found the accuracy of our therapeutic indications. In direct proportion, therefore, as any writer shall aid in the improvement of diagnosis, does he deserve the gratitude and respect of all practical men. And if this be true, as it is, even of trifling and comparatively unimportant maladies, how much more forcibly must it apply to the most serious and alarming diseases to which the human frame is liable! So much may be predicted of the Lectures before us, in which Dr. Marshall Hall has laid down the most important principles for the prevention of disorders of a momentous character, and has so explained their diagnosis as that the results of his researches will be felt and appreciated most truly by those who have experienced the difficulty and anxiety of deciding upon the proper line of treatment in apoplectic and paralytic seizures.

No premonitory sign of any disease of the nervous centres will be lightly heeded by the conscientious and attentive practitioner, no rules of diet, habits, or regimen, will be neglected by him, if

they will help to ward off an attack which *may* prove instantaneously fatal. These premonitory signs can only be comprehended by the aid of a correct diagnosis; prevention can alone be founded upon sound views of the pathology of the disease. This correctness of diagnosis, and this soundness of pathological views, we believe are to be found in the present exposition of Dr. Hall's opinions with reference to that extensive class of cerebral attacks which are independent of organic disease of the nervous centres. The scope of these Lectures, however, will best be presented in the author's own words:—

“In *all* the affections treated of in these lectures, certain causes and principles, emotions and irritations, act directly or diastaltically upon the muscles of the neck, inducing what I have ventured to designate *Trachelismus*. If this *spasm* can be dissolved, all its *effects* cease, more or less perfectly. How important, then, is this view of the subject! In this manner we are enabled, I believe, in many instances, to prevent attacks of apoplexy, of paralysis, of epilepsy, and even of mania! Surely this is an important result. Man lives a life of emotion. No moment of that life is passed in absolute tranquillity of mind. Every emotion has its influence on every muscle of his frame. It is written on the countenance, on the posture, on the very hands. The muscles of the neck do not escape; grief and shame choke; shame and indignation flush the face and neck. But what we term *expression*, as it affects the neck, is the first stage of *trachelismus*; and blushing and flushing are forms of *phlebismus*. Extremes of these become cerebral or spinal seizures.” (Preface.)

In his first lecture the author submits some preliminary observations on the threatenings or *Minæ* (as they were termed by Heberden) of apoplexy, &c. In so doing, Dr. Hall quotes freely from the writings of Heberden and Abercrombie, as supporting his views. Dr. Hall describes the class of cases which he denominates *paroxysmal* apoplexy, paralysis, &c., and shows the latter to be the same as those which have been termed simple apoplexy; cases in which the attack passes off in a longer or shorter period without leaving any ill effects, or proving at once fatal, leave behind no trace of morbid appearances in the brain. These cases Dr. Hall explains by pointing out the fact of im-

peded return of blood along the *veins*, induced by spasmodic action of the muscles of the neck. To the latter condition he has applied the name of *Trachelismus*, while the state of the veins consequent thereon he designates *Phlebismus*. No danger of a similar nature, Dr. Hall observes, attends the most violent *arterial* action so long as the return of blood by the *veins* is unimpeded. This is a point of importance to be borne in mind in the discussion of this subject. Dr. George Burrows has shown most clearly that the brain may become overloaded with blood. Dr. Marshall Hall has here demonstrated the rationale of its occurrence under certain morbid conditions, and the effects thereof in the causation of disease.

The author in the next place proceeds to the more detailed consideration of the paroxysmal form of these disorders of the brain and spinal cord. He points out the semeiological value of lividity and tumidity in paroxysmal affections, the *modus operandi* of *trachelismus*, the state of the muscles of the neck during sleep, and the injurious effects of a tight collar or cravat.* Dr. Hall concludes his first lecture by the relation of several experiments and cases which bear out or illustrate his pathology, and by remarks upon the diagnosis of paroxysmal from other forms of apoplexy. The second lecture is preceded by a synoptical table of cerebral and spinal seizures, explaining the production of paroxysmal attacks originating in excitement or irritation of the diastaltic nervous system.

“Why these causes should select the muscles of the neck, and those principally, for the display of their influence,” the author confesses is to him “a mystery; but it is not the less a fact that they do so.”

In this lecture the author traces more in detail the course of irritation along the *esodic* and *exodic* nerves, and the consequent production of muscular spasm. Several cases are also here related to exemplify the explanations given. Dr. Hall, in referring to the treatment of these cases, speaks favourably, although conjecturally, of the utility of strychnia as a *spinal tonic*, and

* In a note at the close of the lectures Dr. Hall refers to the effects of a ligation on the neck, as shown on the body of Joel Dennys, lately murdered in Essex.

puts interrogatively the suggestion of the benefit to be obtained from emetics at the onset of the attack.

The relations of apoplexy, paralysis, epilepsy, and mania, are then traced by the author, and illustrated by an interesting case communicated by Mr. W. F. Barlow, an acute observer and original thinker.

The third lecture is more particularly occupied upon the diagnosis and treatment of these cases.

"The great question," the author truly remarks, "in regard to the diagnosis of apoplectic and paralytic seizures, is that of their inorganic or organic character, primary or secondary" (p. 51).

Dr. Hall considers

"that form of apoplexy or paralysis which arises from emotion or irritation as primarily *inorganic*. That form of these affections which arises out of disease within the encephalon, and especially from rupture of the substance of the brain, as *organic* in its character."

The varieties of the first form are then described by Dr. Hall in a long quotation from Abercrombie's work, which he regards "as one of the most important in medical writings."

Cerebral seizures are thus classified by Dr. Hall:—

"1. *The Paroxysmal*; and

2. *The Organic*;

and each of these may be subdivided into—

1. *The Apoplectic*; and

2. *The Paralytic*;

whilst each of these may present itself in the form of

1. *The Slightest Threatening*; or

2. *The Severest Seizure*" (p. 56).

Paroxysmal cerebral seizures are distinguished by the author from organic seizures by the pallor of the countenance, faintishness, sickness, and sometimes severe pain of the head, observed in the latter; while the former are characterised by flushing of the countenance, recurrence of attacks, their partial nature, &c., &c., and by the absence of severe pain in the head. The great and real distinction being that the former consists in a state of congestion; the latter in the occurrence of rupture, &c., of the structure of the brain.

The real value of a diagnosis is to be seen in the results of the treatment founded thereon. Herein, we apprehend, will be practically found to consist the true worth of Dr. Hall's distinc-

tion between paroxysmal and organic seizures. We have all been too long and too well familiar with the embarrassment which besets the choice of means for the relief of an apoplectic "*fit*;" and every scientific practitioner can imagine in some degree the fearful effects which must have resulted from the former routine practice of depletion in all cases. It is true that this evil and its cure have been in a great measure pointed out by previous writers; but Dr. Hall has, we think, in these lectures, more distinctly and palpably separated the two classes of cases than has been done by his predecessors, and thereby rendered very great and essential service to therapeutics.

We quote the author's observations with reference to treatment:—

"In the treatment of the apoplectic and paralytic attack, the great questions relate to the administration of blood-letting and emetics. In the decided paroxysmal seizure, our practice may be, and ought to be, energetic. We should promptly take away blood, and we should induce sickness and vomiting."

"But, in organic apoplexy or paralysis, it may be a question whether we should take blood; but there can be no question in regard to the administration of emetics. Emetics ought, I believe, and for the reasons stated, to be avoided." (p. 62.)

To these principal means the author joins other subsidiary measures, for the details of which the reader will do well to consult the work itself.

Dr. Hall regards epilepsy and epileptoid affections as being essentially the same as paroxysmal apoplexy, the difference being only one of degree, or of the vessels compressed. If the muscles in spasm be those which compress the jugulars, apoplexy will be the result; if those which compress the vertebrae and close the larynx, epilepsy. The author speaks with confidence of the benefit of strychnia in epilepsy, and urges the use of emetics when a fit is imminent. On the general treatment of these cases we must, as with regard to that of apoplexy, refer the reader to the lectures.

Dr. Hall explains and illustrates what he describes as "hidden seizures" by the relation of a very instructive case. The attacks referred to under this title are those of slight paroxysmal character; occurring, perhaps, during sleep, or at unobserved times, and which, passing

off without consequences, are unnoticed, until, their recurrence being attended with serious results on some subsequent occasion, their real nature is revealed. Dr. Hall refers to a case of paroxysmal mania leading to the commission of murder as an exemplification of his views on "hidden seizures."

The preceding analysis represents, we trust faithfully, the facts and reasonings contained in these lectures by Dr. Marshall Hall. Whatever may be the difference of opinion as to other theoretical views that have been propounded by their author, no one actually engaged in the treatment of disease can be insensible to the practical importance of the therapeutic inferences which the author has here drawn. Every medical attendant upon the sufferer in an epileptic or hysterical paroxysm must have been impressed with the degree to which the muscles of the neck have been implicated at the outset of the attack, and, conversely, with the concurrent subsidence of the urgent symptoms, and of the spasmodic action of the muscles of the neck. We doubt not that the clinical observer will concur with us in the opinion that the suggestions of Dr. Hall are sufficient to explain the occurrence of the turgidity of the countenance, ecchymosis, epistaxis, &c., often seen to attend or precede apoplectic seizures; the cerebral and spinal symptoms; their accession and recession in a moment of time; the assimilation of the latent with the evident effects; the influence of the emotions and irritations; the different degrees of congestion, and fatal sanguineous extravasation or serous effusion. We therefore consider it a duty incumbent upon every practitioner of medicine to make himself acquainted with the contents of these lectures by Dr. Marshall Hall: this he may do at a very small outlay of money or time. Although constituting a small volume, we can affirm that they contain as much useful practical matter as some folios. The reader cannot avoid deriving such information from its perusal as may aid him at the bed-side. He will find that Dr. Hall has therein very distinctly laid down the principles of the diagnosis of the diseases of which he treats, and has, at the same time, pointed out the most trustworthy indications of treatment. For the service hereby rendered to medical science, we consider that Dr. Hall merits that respect and gratitude to

which we have already alluded in introducing these lectures to the notice of our readers.

Essays and Notes on the Physiology and Diseases of Women, and on Practical Midwifery. By JOHN ROBERTON, formerly Senior Surgeon in ordinary to the Manchester and Salford Lying-in-Hospital and Dispensary for the Diseases of Women and Children, 8vo. pp. 530. London: Churchill. 1851.

MR. ROBERTON has divided his work into two parts; the first including subjects of physiological and ethnological interest, the second those of a directly practical character with reference to midwifery. The essays comprised in the first part are more immediately connected one with the other than those in the second; the former consisting of a series of researches on the influence of climate upon the period of female puberty, the latter presenting detached papers on points of obstetrical practice. It is with the second part of his work that we shall on the present occasion more particularly occupy our attention.

We must not, however, omit some notice of the very interesting and extended investigations embraced by the first division of the work. Mr. Robertson, it is quite clear, has spared neither time, labour, nor money, in obtaining the information necessary to determine the correctness or incorrectness of the popular opinion, that difference of climate is the cause of difference in the period of female puberty. Of the worth of these researches some estimate may be formed from the fact, that the great ethnological authority, Dr. Prichard, modified his own opinions on this point in conformity with the conclusions of Mr. Robertson. The numerous topics which are brought to bear upon the inquiry, and the pains that have been taken by Mr. Robertson to arrive at facts, as separated from opinions, invest his observations with unusual interest.

Mr. Robertson has extended his researches to every climate and every latitude. He has received authentic information from the most trustworthy sources, at extremes north and south of the globe. He has pushed his inquiries from one end of the earth to the other, and moreover all round it.

The facts thus accumulated now constitute as complete a body of evidence as could possibly be communicated to the profession. We may here state that the conclusions thence derived are, that the age at which menstruation appears is pretty much the same all over the world,—that is, about fifteen; that where it occurs early it is owing to the immoral condition of a people; and, that the frequency of early puberty has been much exaggerated. In addition to the determination of this question, the author shows that the recurrence of the catamenia takes place at three weeks in a very large number of women. In the next place the author adduces statistics bearing upon the period of the cessation of the catamenia.

Mr. Roberton then considers the law which regulates the intervals of conception in the human female, and arrives at the opinion, supported by statistics, that lactation exerts more influence upon conception than physiologists have allowed; that conception does not ordinarily take place until after weaning; that in civilized life, where so many causes operate to induce an irritability of the female constitution, lactation should not extend beyond about ten months, while in ruder states of society lactation is borne with less injury for a period of two years and upwards. The average length of the intervals of conception is, amongst the women of England, from twenty-one to twenty-four months. Whatever may have been the opinions of physiologists, the experience of every practical obstetrician must have brought before him many facts bearing out the conclusions of Mr. Roberton.

The first part of Mr. Roberton's work concludes with a chapter on the "hysterie constitution;" presenting a good sketch of hysteria.

The second, or especially practical, part of the work, sets before us the author's reflections upon various points of practice as derived from his experience in the Manchester Lying-in Hospital, from 1827 to 1838, during which period forty-three thousand five hundred women were delivered by the Charity, "besides a multitude of out-patients treated for diseases peculiar to women and children." The topics discussed in this part of the volume we shall now severally bring under our readers' notice.

The first subject is that of the obste-

tricle relations of the pelvis; in the discussion of which Mr. Roberton brings forward facts and observations proving that from this source woman is exposed to no more difficulty or danger in parturition, naturally, than the brute animal.

The author in the next place discusses a question far easier to be settled in a book than at the bed-side—"How to use the midwifery forceps with safety to the mother and child:"—a question which has often failed to be resolved in the hands even of the most skilful practitioners. Mr. Roberton forcibly dwells upon the necessity of actual personal experience in difficult cases, in order to the acquisition of skill or confidence in the use of instruments for the assistance of parturition. As an important means to the successful application of the forceps, the author treats at some length of its size and shape, and gives the dimensions of the pair which he has himself had made, and which he has employed since the year 1830. The author further enters into a consideration of the mechanism of labour in relation to the use of the forceps, and into the mode and occasion of its use. The directions given by Mr. Roberton are judicious, and especially deserve the attentive study of our younger brethren. We should hesitate, however, to recommend the use of this instrument as frequently as it is advised by the author, who we think somewhat exaggerates their necessity by stating only the extreme results of delay. That the consequences of delay are sometimes such as lead to the deepest regrets there can be no doubt, but we are by no means certain that more mischief has not resulted from the too early than from the too late use of the forceps. The danger, Mr. Roberton states rightly, is to be found, not in the mere duration of the labour, but in the greater length of the second stage after the speedy termination of the first. Cases are given in illustration of this position. The proportion of forceps cases to the whole number attended by Mr. Roberton is not, however, given. The duration of the labour was under nine hours in three; under twenty hours in thirteen; from twenty to thirty hours in seventeen; from thirty to fifty hours in five; above fifty hours in four cases. The proportional relations of these numbers are required before we can assent to their value.

Mr. Roberton makes the following observations upon the use of the forceps:—"A regard to nature in delivering the head demands the forceps, to the exclusion, with some exceptions, of such instruments as the tractor, the lever, the fillet, and the sucker, whose powers operate in a straight line." In this proposition we entirely concur. Another inference on which Mr. Roberton founds his practice is, that "danger to the foetus, in protracted labour, arises from pressure of the uterus, emptied of its waters, on the funis and body, the danger being in proportion, *cæteris paribus*, to the force and constancy of the uterine pains." The author, if we might presume to say so, appears, in advising the use of the forceps, to attach undue importance to the prospect of saving the life of the infant, where no danger may accrue to the mother from the protraction of the labour, while on the other hand the frequent recourse to the forceps may be the source of many evils to the mother. We must not, however, omit to state that the author gives a caution against the too frequent use of the forceps.

The results of the use of forceps in the above mentioned forty-three cases were as follows:—"The mothers all completely recovered, and in thirty-six instances the children were alive. With respect to the seven still-born, in one the labour was eighteen hours; in two, twenty-two hours; in one, twenty-nine hours; in one, thirty-six hours; in one fifty-four; and in one, fifty-five hours. The catheter was required after labour in seven of the forty-three cases." It is possible that the objections which we have now suggested may be more apparent than real. If the statistics had been given, it is highly probable that they would have shown results in harmony with the general soundness and prudence of Mr. Roberton's opinions and practice.

The author follows up these remarks by a section upon laceration of the uterus, in which he gives notes of twenty-seven cases, and deduces certain inferences from these; *scil*: that in the majority of cases this event occurs at a period under thirteen hours from the commencement of labour; that it occurs oftenest in second, third, fourth, and fifth labours; that those who are fruitful mothers, as shown by a high number of births, are comparatively less exposed to this fearful accident than those

earlier in the career or lower in the scale of fecundity; that the uterus at its cervix seems to give way with equal readiness in all parts of its circumference. The author adds observations on the treatment to be adopted.

"How to turn with the least suffering to the mother," constitutes the subject of the succeeding essay, and should be studied by beginners.

Mr. Roberton next discusses the cause of the presentation of the funis: this he attributes to the failure of the presenting part to fill the brim on the escape of the *liquor amnii*, the cord then floating into the vagina: cases are related in support of this explanation.

Following this is the consideration of the best mode of securing the speedy expulsion of the placenta. The occurrence of hæmorrhage, of the hour-glass contraction, &c., are included among the topics discussed in this essay. The practice enjoined by Mr. Roberton is, as laid down by Dr. Collins, the making steady gentle pressure with the hand on the uterus after the birth of the child, which is not to be hurried. The neglect or violation of this last caution is frequently the source of one or other of the evils interfering with solution the expulsion of the placenta.

The advice given in this and the following essay on secondary uterine hæmorrhage includes much that is valuable and deserving of attention.

Relaxation and descent of the uterus, vagina, and bladder, in the puerperal state, form the next topics: these are followed by cases and observations in illustration of the signs of pregnancy, and which cannot fail to impart some useful hints to the most experienced, at the same time that they will be found most valuable to the less advanced practitioner. The cases are instructive, and present well-marked illustrations of the difficulties so often encountered in the of this problem.

In treating of the puerperal state and its dangers, in the following essay, the author states that, as the result of inquiries and experience among the poor of Manchester, including a large proportion of Irish, that the mortality in childbed (supposing no epidemic, puerperal fever prevailed) is only about one in from seven to eight hundred. There is reason to believe that the mortality is much higher in the grades of society above these. The causes of

this difference are treated at length by Mr. Robertson.

Mr. Robertson concludes his work with "Notes on Subjects connected with Pregnancy and Operative Midwifery;" an "Apology for Midwifery as a Science;" a supplementary paper on "Hindoo Midwifery;" and an essay on "Laryngismus Stridulus, or Child-Crowing." The last named essay appeared a few years ago in the pages of this journal, and has been regarded by competent judges as a very valuable contribution to the treatment of that affection.

In conclusion, we recommend this work very strongly to all engaged in obstetric practice, or interested in ethnological studies. It possesses practical utility, and physiological interest, combined with the fruits of a large experience, great power of observation, and an extensive and varied erudition.

Proceedings of Societies.

ACADEMY OF SCIENCES, PARIS.

June 9, 1851.

On the Persistence of Vital Properties in Limbs in the state of Cadaveric Rigidity.

M. BROWN-SEQUARD forwarded a note in which he stated that he had recently found that limbs, in the condition usually known as that of post-mortem or cadaveric rigidity, may still be living—*i. e.*, they may cease to be rigid, may reacquire muscular irritability and sensibility, and may be moved by the power of the will.*

The following is an abstract of these researches:—

In the body of a guinea-pig which had been in a state of rigidity from ten to twenty minutes, he had divided the aorta and vena cava at the point of bifurcation of those vessels. This done, he had brought the distant portions of these vessels, by means of a quill or glass tube, into communication with the aorta and vena cava of a living animal of the same species. The blood of the living animal has thus been made to circulate in the lower limbs of the dead animal. At the end of about eight minutes the cadaveric rigidity of the lower limbs had disappeared, and, two or three minutes later, movements have been excited by irritating the limbs or nerves.

* It was stated by Dr. J. P. Kay, in 1834 (Treatise on Asphyxia), that limbs which had lost their muscular irritability might reacquire it by the injection of arterial or venous blood.

It follows from this experiment that the nerves and muscles, having lost their excitability, may regain these properties under the influence of blood, even where the rigidity has lasted a quarter of an hour.

The same result has been obtained by a more easy experiment. Having cut the body of a guinea-pig into two at the level of the lower border of the kidneys, leaving no communication between the two halves, except by the aorta and vena cava, M. Brown-Sequard then tied the aorta immediately below the origin of the renal arteries. The muscular irritability gradually diminished little by little, and gave way to cadaveric rigidity in between fifteen and forty minutes after the ligature of the aorta. After the rigidity had lasted fifteen or twenty minutes the ligature was relaxed, the circulation was re-established in the posterior segment, and the rigidity was observed to disappear gradually, the muscles and nerves resuming their excitability.

Lastly, in order to ascertain if voluntary movements can be restored to limbs that have been in a state of cadaveric rigidity, M. Brown-Sequard has tied the aorta immediately below the origins of the renal arteries in healthy rabbits. The sensibility of the posterior portions of the body has been lost in six, eight, or ten minutes; two minutes later all voluntary movement has ceased. The irritability has lasted an hour. Rigidity has supervened in from an hour to an hour and twenty minutes after the ligature of the aorta. The rigidity was permitted to continue for twenty minutes, and then the ligature was relaxed. The circulation, and with it the functions of the nerves and muscles, were re-established.

The author concluded with these propositions:—

1. That muscles are not necessarily dead because they exhibit cadaveric rigidity—that, if they are not actually alive, they have the faculty of living.

2. That want of circulation of the blood deprives the muscles and nerves of their functions: the restoration of the circulation restores these.

3. That, notwithstanding the duration of rigidity shall have been as long as twenty minutes, sensibility and voluntary movements may be restored.

* * * These experiments may be, and doubtless are, interesting and conclusive, but they are barbarously cruel.

June 23, 1851.

The Inutility of Bile for Digestion.

M. BLONDLOT transmitted an essay in which he proposed to answer the question

whether the bile is entirely excrementitious, or whether it performs an essential part in the process of digestion.

In this work the author laid it down as a principle that, contrary to general opinion, the bile, a veritable detritus of which the economy rids itself by way of the intestines, exerts no chemical influence of any importance on the alimentary substances with which it comes in contact; and that, by consequence, it might cease to flow into the intestinal canal without interruption of the process of digestion for all purposes of the maintenance of life. M. Blondlot called the attention of physiologists to the chief fact of his essay, which was the establishment in living animals of fistulous openings carrying off the entire quantity of bile, the normal duct being obliterated. In the animals thus experimented upon digestion took place perfectly, as in other animals. In one animal the bile had been thus carried off externally during a period of five years; at the end of which time, the animal having died, its body was carefully examined, and no trace of communication with the intestine existed. The uses of the bile in the alimentary canal are secondary: it contributes with other fluids to form emulsion with fatty matters, and it assists to neutralize acids: its primary office is the elimination of detritus.

Hospital and Infirmary Reports.

CLINIQUE DES DEPARTEMENTS.

General Inflammation of Serous Membranes. Under the care of Dr. CARVILLE, Physician to the Central House at Gaillon.

L—, forty-one years of age, employed during the last ten months as a weaver, was attacked on the 2d March, at 11 o'clock at night, with symptoms of inflammation in the abdominal and cranial cavities, of so insidious and obscure a character, that it was difficult, from the impaired state of the patient's mind, to determine the precise seat of disease.

His comrades represented him as usually morose, taciturn, and gloomy, often talking to himself in a low tone, and as being chilly, and frequently shivering without apparent cause: they stated that he constantly complained of colicky pains; that he would drink more than a pint of water at a draught, and as much as seven or eight pints in the course of a day; that he had a voracious appetite, and was troubled

with frequent liquid yellowish evacuations from the bowels, even during the night. He was of a bilious temperament, and of a moderate constitution. He had inguinal hernia on the left side. He had been in the House ten months. On the 3d of February he was admitted into the infirmary, suffering from the hernia: this was reduced without difficulty, but the abdomen continued larger than natural, and so tender to pressure that he could not bear his garments to be fastened.

Pressure on the abdomen generally, caused pain; a tympanitic resonance was produced over its whole extent, except that the region of the liver seemed somewhat extended. The flatulency, and other indications of impaired digestion, were considered to be partly referrible to the bad state of his teeth; at the same time that the furred and red condition of the tongue, with the peculiar tinge of the skin, afforded evident signs of chronic enteritis. The patient complained of constant headache; his eyes were wanting animation, his mind was feeble, and he answered questions with difficulty.

The medical treatment was confined to controlling the derangements of the intestines, and to the use of a regular milk diet. In about twelve days the patient's health was so much improved that, at his desire, he quitted the infirmary. When again left to himself, he indulged his appetites uncontrolled by reason, and soon suffered a relapse of the bowel complaint—so severely, indeed, that the evacuations were incessant. On the 10th February he was readmitted into the infirmary, with the following symptoms:—He lay constantly on his right side bent up, and his head hidden under the bed-clothes. His tongue was red; he had great thirst, hiccups, and vomiting; many stools in the day, tenderness of the abdomen, and dysuria; continued somnolence, though easily waked; on being roused, seeming bewildered, making no answer to questions, and having a stupid look and grimace; the skin was warm; the pulse frequent and small; he had occasional rigors, followed by flushes. The symptoms continued to get worse for two days, when he became comatose and died.

Autopsy.—Twenty-four hours after death.—The body was found rigid and emaciated; the integuments of the face of a dull yellowish aspect, presenting the peculiar tint which attends chronic affections of the abdominal viscera.

The thorax was first examined. The lungs were healthy, with the exception of cicatrices at the upper part. The pleura exhibited traces of old inflammation, in the form of false membranes.

In the abdomen, all the viscera were found agglutinated together. The bladder was so firmly adherent to the pelvis and abdominal walls as to interfere with its contractions. The liver, spleen, and stomach, were immoveably fixed by the adhesions which had united the surfaces of the peritoneum as one continuous membrane. Throughout the extent of these adhesions were numerous purulent deposits about the size of a millet seed: they appeared to be seated beneath the serous membrane, and presented at first the appearance of miliary tubercular meningitis; but a minute inspection showed that an analogy only existed, the two differing one from the other in the nature of the tissue. The false membrane in this case was easily torn, and the intestinal folds were separated from each other with great facility, indicating its recent and inorganic character. Another proof to the same effect is furnished by the condition of the hernia which had been reduced fifteen days previously: the canal and sac were obliterated by the same recent adhesions and purulent deposits. The diarrhœa, thirst, &c., had been referred to enteritis; and, on opening the small intestine, its mucous membrane was found congested, softened, and in some parts thickened. These appearances, therefore, not only explained the symptoms, but solved the pathological problem. The inflammation had at a later period extended to the serous membranes, where its effects were modified by the cachectic condition of the patient.

The dura mater was found injected; the arachnoid was adherent at some points, and was studded generally with albuminous miliary deposits; beneath the arachnoid the hemispheres were covered with a gelatinous deposit. About two ounces of clear serous fluid was found at the base of the brain. At one point of the right hemisphere the inflammatory congestion had passed into extravasation, constituting an apoplectic effusion beneath the membranes. In the substance of the middle lobe of the brain a small clot of blood was found, surrounded by a yellowish areola. This was evidently an old apoplectic cyst. On the choroid plexus of the lateral ventricles gelatinous cysts were observed. The base of the brain exhibited signs of inflammation, without, however, the miliary deposits.

Thus inflammation was found to have existed in the serous membranes of the three chief cavities of the body. The point of departure of these inflammations was probably the intestines; the chronic disease of which had induced an altered condition of the blood, giving it that crisis which favoured the formation of false

membranes. It is surprising, as Dr. Carville observes, how life could be sustained for one day under such an accumulation of complicated disease.

HÔTEL DIEU.

Case of Excessive Obesity, followed by Death, under the Care of Prof. Rostan: with Remarks upon the Causes, Consequences, and Treatment of Polysarcia.
By Dr. ARAN.

CASE.—A young woman, aged 25 years, of a moderate height, was admitted on the 1st of April, afflicted with polysarcia, some signs of bronchitis, and such a degree of embarrassment in her breathing, that she seemed on the point of asphyxiation. She stated that she had been in the enjoyment of good health, and was of the ordinary size up to the age of twenty-one, at which period, after a second confinement, she began to manifest considerable embonpoint; this continued to increase until it had reached the monstrous extent exhibited on her admission. For several months the difficulty of breathing and the unwieldy size of her body had compelled her to keep the recumbent posture. She could not in any way account for her corpulence, as she had not in any manner altered her diet or habit of living.

It would be difficult to give an idea of the hideous aspect presented by this patient. Her head was lost in her shoulders by the intervention of a monstrous and shapeless neck; her features were disguised by the enormous hypertrophy of her cheeks, chin, lips, and eyelids. The mammæ, enlarged to the size of an adult head, rolled upon the abdomen, which also fell in folds of fat upon the thighs. Her limbs had acquired an enormous size, they felt like masses of fat, and retained the impression of the fingers as if œdematous. The following measurements were made during life.

| Circumference of the— | Inches. |
|------------------------------------|---------|
| trunk (at the umbilicus) | 60 |
| thigh | 32 |
| knee | 16 |
| calf | 20 |
| arm | 17 |

The fat upon the abdominal parietes was between three and four inches in thickness; upon the thoracic parietes upwards of four inches; the thickness of the mammæ about six inches. By an unfortunate omission the patient was not weighed, but there was no doubt that her weight might have been rightly estimated at four hundred kilo-

grammes, or between three and four hundredweight avoirdupois.

Depletion greatly relieved the patient at first, but this gradually augmented, so that the patient was, during the last days of her life, obliged to sit by her bedside. Death took place suddenly on the 1st of May.

On examining the body, a large quantity of fat was found about the heart and large vessels, and on the mediastinum. Fat was also found between the pleura and the thoracic parietes, and, as Dupuytren had before observed, not in the intercostal spaces, but behind the ribs, where it was accumulated to such a degree, that it formed numerous tongue-like processes hanging in the cavity several inches in length. No internal organ had undergone the fatty transformation; the muscles were perfectly healthy, even enlarged, but all parts were loaded with a covering of fat. The heart was about four times its normal size, its cavities were greatly hypertrophied and enormously dilated, its orifices and valves were perfectly healthy, and contracted, as did the vessels, with the large size of the cardiac cavities. The lungs were œdematous and gorged with blood; the bronchi dilated and congested; the liver was large and congested; the spleen about twice its usual size; the kidneys were greatly loaded with blood. None of these organs were otherwise unhealthy.

REMARKS by Dr. Aran*.—One of the most curious questions which such a case as the above gives rise to, is, how it is possible that the fat which exists usually in the proportion of about a twentieth of the body can be deposited in such quantities as to constitute at least four-fifths of the body? To what can this disposition to create fat be attributed? It is not possible in the present state of science to point out precisely these conditions; we must, therefore, confine ourselves to indicating the circumstances under which it is most frequently met with.

It will be noticed that in the case of this young woman the obesity followed upon an accouchement. This is not the first instance in which this cause has been indicated. M. Raigè-Delorme has pointed out a similar case in his "*Dictionnaire*," art. "Polysarcia," and Dr. King Chambers has given three examples of this kind in his recent interesting work on Obesity. Youth is not incompatible with this state. Dr. Chambers has shown by the statistics in his work that obesity has been observed most frequently between the ages of twenty and

forty. The disposition had appeared before this age in many cases.

Authors have referred to the obesity which often occurs during infancy, and which sometimes disappears, although it occasionally remains, and proves to have been the origin of monstrous obesity. Several instances are noticed by Dr. Chambers. The influence of trades and professions in the production of obesity has been dwelt upon by various writers, but Dr. Chambers has shown that greater importance as to this part of the subject attaches to previous disease and hereditary influence.

The reporter proceeds to quote from Dr. Chambers the effects on the functions of respiration and circulation caused by polysarcia, and the nature of the causes of sudden death in these cases. He further points out from the same authority the nature of the treatment to be adopted; and the importance of exercise and regimen in promoting the absorption of fat in numerous instances.

Correspondence.

THE LATE ELECTION OF MEMBERS OF COUNCIL AT THE COLLEGE OF SURGEONS.

SIR,—As some misapprehension exists as to the reasons why a ballot did not take place for Mr. Gulliver at the late meeting of the College of Surgeons, I beg that you will give this note a place in your journal, for the purpose of removing all misapprehension on the subject.

Mr. Gulliver is, as is well known, the distinguished surgeon of the Blues. Under ordinary circumstances his regiment would have been at Knightsbridge Barracks on the 1st of July. That would, then, have been his place for practising his profession. It happened, however, that the Foot Guards occupied a portion of the barracks, and that the authorities had determined that no change should take place until the Exhibition was closed; and, therefore, as Mr. Gulliver's place for practising his profession is wherever his regiment is stationed, it is the fact that at the meeting of the College that place was Windsor.

The certificate to be signed specifies that at the time a candidate for the Council is proposed, he is *bonâ fide* practising his profession within five miles of the General Post Office.

Mr. Gulliver's friends felt that it was impossible to sign that certificate, unless, upon a representation of the facts, the President, on the part of the Council, admitted that the circumstances would justify them in signing it.

* We have considerably abridged this portion of the report of this case, as the writer has borrowed largely from Dr. F. K. Chambers, with whose work our readers are doubtless familiar.

These were the reasons which induced me to put the question I did to the President.

As he declined to answer the question, and as the Council have the power to remove any person they may deem not duly elected, and as Mr. Gulliver's friends had reason to think that, in the event of his election by the Fellows, of which they had no doubt, the question would be raised in the Council, they felt that they were not justified in placing him in such a situation.

The fact of his being out of England for the temporary purpose of a tour would not, of course, have deterred them from proposing him for election.

I am, sir,

Faithfully yours,

B. PHILLIPS.

Wimpole Street, July 15.

ON THE DESIGNATIONS OF THE GRADES OF THE PROFESSION.

SIR,—A vast deal of difficulty has been experienced, and no end of jealousy excited, in the medical profession, through the misapprehension or misapplication of the designations by which the several grades of its members are recognised.

The majority—those who undertake all varieties of cases, medical or surgical—have of late, as is well known, sought to class themselves under the appellation of “GENERAL PRACTITIONERS.” Now this title, when closely examined, must be allowed to be singularly indefinite and ill-chosen, especially by a party who have been somewhat boisterously and eagerly demanding distinct corporate rights and definite attributes. In the first place, what is a “general practitioner?” a practitioner of medicine, surgery, midwifery, pharmacy?—Of all these. Then the title should be made to convey the expression of these various departments, in order that it may be known that it does not mean also “general practitioners” of homœopathy, hydropathy, *chronothermopacy*, *coffinopathy*; *cum multis aliis*.

Independently, however, of such distinctions as are thus suggested, it would be extremely puzzling to sift the practitioners who restrict their practice to medicine, surgery, obstetrics, and pharmacy, from those who, although having the titles of physicians for instance, as expressed by M.D. degrees, do nevertheless practise all these departments, except, it may be, pharmacy, and perhaps obstetricy. In like manner, the “surgeon,” although professedly a “pure,” is by education, by position, and by the requirements of the public, equally competently and legitimately a “general practitioner:” to either

of these, medical or surgical cases come pretty nearly alike. The only real distinction is, where the operative skill of the hospital surgeon is necessarily, by his opportunities, greater than that of a surgeon not enjoying the same advantages of a field for gaining experience; or where, the physician holding a hospital appointment, restricts his offices to cases strictly medical or obstetric.

The writer can see little reason or wisdom in the display of vanity which leads surgeons in general practice, as it is called, to ignore or to repudiate the definite appellations, in which there is nothing disgraceful, under which their fathers attained respectability, fame, and *sometimes* fortune. The grades of the profession would be more intelligible to the public if they were simply the “physician,” the “surgeon,” and the physician or surgeon-apothecary. The latter term would point out those (whatever their professional degree) whose position required the combination of pharmacy with other branches of practice; while the title of physician or surgeon, alone, would indicate the classes from which the public and the profession could find for themselves those in whom they might place their confidence for consultations, either medical or surgical. A wide margin must ever be left, whatever legislative enactments may be obtained, for that liberty of the subject, which is a part of the privileges of an Englishman, to seek his advice wherever he feels disposed. What laws, short of despotism, could prevent non-professional persons from consulting Sir Benjamin Brodie on derangements of their digestive organs, or Dr. Latham with reference to syphilis?—None whatever.

Mankind have ever been prone to quarrel more fiercely over words than things; and therefore it is, perhaps, little to be wondered at that medical men should have committed the same mistake. Never was this mistake more palpably evident than during the recent vain struggle for the establishment of a “College of General Practitioners.” Supposing the charter obtained, whence and where the members and Fellows of the College? By what means distinguish them for any practical purposes, in the appreciation of the public?—Surely not at all. The only real distinction of grades already exists; it has been the growth of ages, and the result of advancing civilization, which ever tends more and more to a division of labour. No new institution would extinguish what has thus grown to be part of our customs. I may observe, for my own part, that I have not that particular kind of false pride which would lead me to adopt such an indefinite

appellation as that of "general practitioner." I should prefer, if custom still sanctioned it, to sign myself, after the time-honoured fashion of my forefathers,

Your obedient servant,

A SURGEON-APOTHECARY.

June 27, 1851.

Medical Intelligence.

THE CHOLERA IN THE CANARY ISLANDS.

ACCORDING to intelligence of the date of July 1st, the cholera and typhus fever were raging in the Canary Islands and Palma. In Grand Canary 2,000 deaths had taken place, and the island was in a most deplorable state.

[We subjoin from despatches, dated June 18th to the 24th, received from Mr. H. Houghton, the British Vice-Consul in the Canary Islands, the following particulars respecting the outbreak of, and the ravages caused by the cholera.]

"On the last day of the past month some rumours were spread of sudden deaths in a part of this place called San Jose, and on that day the body of one person was opened by the medical men: the report of the symptoms bore the appearance of poisoning by some deleterious substance. A day or two afterwards another case was reported in an opposite part of the town, but with the same symptoms; and it appeared that the person had visited San Jose the afternoon before, where he remained some time. On the evening of the 4th the reports were more alarming; and on the 5th, I believe, there remained but little doubt in the minds of the medical men. The first public information received in the town was that the Board of Health had despatched a vessel to Santa Cruz with the official report, and of course all communication with the other islands was cut off. The deaths in the suburbs of San Jose rapidly increased from 5 to 20 on the 7th. I myself was witness on that day to an emigration of the poor people, with their few household chattels, towards the end of the town bordering on the mole, and to the centre of the circle which is called the Risco, the latter composed chiefly of huts dug out of the rock, and inhabited by sailors and the very lowest class of the population. On the 8th the scourge broke out in full force. At the time of the emigration of those from San Jose, the principal inhabitants of the city were escaping in all directions. On the 8th and 9th the greater part of them were out of the town, driven by the most horrible panic to take refuge anywhere. I consider that, out of a population of about

16,000 inhabitants, there did not remain upwards of 4,000 on the 10th; for not only did those fly who could count upon the means of support, but such was the consternation, that the distressed people who had not a day's sustenance at their command wildly escaped anywhere they could: fathers left their children, and children their parents; all ties of relationship were forgotten, and nought but the safety of the moment was thought of. Many were the victims of such conduct. The roads were soon covered with dead bodies, and the disease seized its prey in many of the adjacent small towns and villages. Every calamity now rapidly approached. On the 10th, 11th, and 12th, the deaths were upwards of 100 daily. The hospital was overwhelmed with the dying and the dead. Assistance was eagerly demanded by the few rational witnesses of such scenes, but nowhere to be found. Public funds there were none. The wealthy inhabitants had only thought of their own security, and the paltry sum of 400 dollars, that is said to have been received from the provincial board, ought to have been expended in a few hours. No pen can give you an idea of our sufferings. It has been left to this little insignificant place to complete the picture of horrors so ably described by Daniel Defoe; for, in addition to everything by him related, we had the new feature of the soldiers chasing the few men remaining who had sufficient strength to lift the bodies of the dead. Yes: such was our state that the living could not bury their dead before corruption commenced, and the only remedy left was for the soldiers to seize on any one they could find, — some to dig trenches, and others to hunt in the narrow defiles and filthy huts for the bodies that had been abandoned by all connected with them. This state of things continued with unabated rigour till the 16th, the principal question asked by those who still maintained any degree of composure being, whether it was possible to inter the dead; and the echoing noise, in the void and empty streets of the sledges and carts conveying the naked bodies, covered by a few mats, made but comparatively little impression, as the only anxiety was, that they should be hurried away. On the evening of this day this sad work was in some degree surmounted, and yesterday some approach to tranquillity was evinced. This morning the accounts are more satisfactory. The deaths during the night have materially declined in number, and it is said that many of those who were in a desperate state overnight show symptoms of improvement. I must here mention that since the middle of the night the weather has changed. We have now what is called here '*a levante*,' being a hot and

dry wind; the day is sultry, but the sky bright, and, whether it be from the propensity to perspiration or the dryness of the air, there is evidently a diminution of the disease; and indeed it is time, for it has already carried off nearly 1,000, or one-fourth part of those who abided its fury.

"The first question that arises is, How was this disease communicated to so isolated a place? So many theories have been broached as to its being purely atmospheric, and not by any means contagious, that I am almost afraid of venturing an opinion; but, as my duty is merely to state the generally asserted facts, and not to enter upon theory, I shall do so to the best of my knowledge.

"You are aware that during the prevalence of this epidemic in Europe, even when it reached Cadiz, these islands, as well as Madeira, were preserved intact; the usual course of the winds is from that direction; there has been no change noted in this respect within these last months. The cholera has latterly been making great ravages in the West Indies,—a position diametrically opposed to the current of the air. It appears, therefore, almost impossible that we should have received the germ of this destroyer simply through the atmosphere. The credited reports here tend to a contrary opinion. About the 8th or 9th of May a vessel arrived from the Havannah with a clean bill of health, and was consequently admitted to pratique without any preliminary fumigation. It is said that the first house in San Jose (a suburb principally inhabited by poor people) in which this disease made its appearance was that of a washerwoman who had taken the mattress and foul clothes of one of the poorer passengers to wash, and that her children slept upon them during the night. Death soon followed; one neighbour after another was slowly but gradually attacked; the seed had found its appropriate soil, and slowly but too surely germinated; and, when the air was sufficiently contaminated, its fatal effects were generalized.

"The symptoms have been the same as in all other parts—the victims, principally the poor, weak, and vicious; and to this number we have the addition of the timid and ignorant. Those who have prudently guarded their health and fortitude have, as yet, suffered but little. The medical men have done their utmost; the principal effort has been to produce perspiration, and the simplest method—that of a hot foot-bath and warm water bottles—the most efficacious. Many have fallen victims to the reaction of too much confidence after mortal fear; for where the disease was

promptly attacked it gave way with great facility, and appeared as trifling;—the consequence, of course, a dangerous relapse from the want of a proper precaution. A great part of the mortality has been caused by the absolute dearth of the common necessities of life among the class attacked."

THE QUARANTINE CONGRESS.

DR. SUTHERLAND, the Medical Inspector of the General Board of Health, has been appointed to attend the Medical Congress to be held at Paris, on the subject of quarantine, by the medical authorities of the several European Governments interested in the question.

LUNATIC ASYLUM AT COLNEY HATCH.

THE ceremony of opening the additional Middlesex Lunatic Asylum at Colney Hatch, and consecrating the burial-ground of that establishment, took place on the 8th inst. At one o'clock, P.M., a large number of the Middlesex magistrates and their friends assembled in the burial-ground of the Colney Hatch Asylum, and the ceremony of consecration having been performed by the Right Rev. the Bishop of London, the assembled visitors proceeded to inspect the new building, which has been constructed for the reception of 12,000 patients, and which is consequently the largest establishment of the kind in Europe. After inspecting the building the visitors sat down to a cold collation, when the chair was taken by Mr. B. Rotch. The company separated shortly after five.

LATIN AND ENGLISH PRESCRIPTIONS.

ON Monday last a petition from the inhabitants of Exeter was presented to the House of Commons, by Mr. Divett, in favour of a law to compel physicians and surgeons to write prescriptions in English instead of Latin.

FOTHERGILLIAN MEDALS FOR 1852 AND 1853.

THE Medical Society of London have announced that the subjects for their medals, offered for competition, are, for March 1852, "The mode in which Therapeutic Agents introduced into the Stomach produce their peculiar effects on the Animal Economy;" and for March 1853, "Wounds of the Abdomen, and their Treatment:" also an additional Gold medal, the subject being—"The Pathology of Convulsive Action."

FULLERIAN PROFESSORSHIP OF PHYSIOLOGY AT THE ROYAL INSTITUTION.

MR. WHARTON JONES, F.R.S., was recently elected to fill this triennial appointment, vacant by the retirement of Dr. Gull.

DINNER AT ST. BARTHOLOMEW'S HOSPITAL.

ON Wednesday last the President, Treasurer, and Governors of this noble Institution, gave their annual dinner in the great hall of the Hospital. Upwards of two hundred gentlemen were present, comprising the Almoners, many of the Governors, and Medical Officers of the Institution. General Sir George Pollock honoured the Governors with his presence. There were also among the guests many of the distinguished foreign physicians and surgeons now on a visit to this metropolis. Among these we noticed Dr. Warren, of Boston; Dr. Pantaleoni, of Rome; Professor Jacger, of Vienna; Dr. Donders, of Utrecht; and Dr. Hannover, of Copenhagen.

THE CÆSAREAN OPERATION.

THIS operation was performed on Wednesday night, July 2nd, on a female patient in Guy's Hospital, by Dr. Oldham. The woman, who has been unremittingly watched, is going on favourably; and the female child which was brought into the world in this unusual and rarely successful manner is alive and thriving.

ELECTION OF OFFICERS AT THE ROYAL COLLEGE OF SURGEONS.

THE annual election of officers of this institution took place on the 10th inst., on which occasion Mr. John Flint South, surgeon to St. Thomas's Hospital, was elected president of the College, in the vacancy occasioned by the retirement, in the prescribed order, of Mr. Arnott; and Messrs. Cæsar Henry Hawkins, surgeon to St. George's Hospital, and James Luke, surgeon to the London Hospital, were elected vice-presidents for the ensuing year. It is stated that the latter gentleman has been requested to deliver the annual oration in memory of the immortal Hunter, and that he has complied with such request. At the same meeting Messrs. Coulson and Dalrymple took their seats as members.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 10th July, 1851:—John Mackintosh, Inverness—Frederick William Headland, Guildford Street, Russell Square—Thomas Henry Taylor, Henbury, near Bristol—Henry Greenway, Plymouth.

OBITUARY.

ON the 6th inst., at Teplitz, in Bohemia, whither he had gone for the restoration of his health, William Teevan, Esq., surgeon, of Bryanston Square, aged 49.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, July 12

| BIRTHS. | | DEATHS. | |
|-----------|------|-----------|-----|
| Males.... | 700 | Males.... | 436 |
| Females.. | 646 | Females.. | 445 |
| | 1346 | | 881 |

CAUSES OF DEATH.

| | |
|--|-----|
| ALL CAUSES | 881 |
| SPECIFIED CAUSES | 868 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 224 |
| <i>Sporadic Diseases, viz.—</i> | |
| 1. Dropsy, Cancer, &c. | 44 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 83 |
| 4. Heart and Bloodvessels..... | 32 |
| 5. Lungs and organs of Respiration | 109 |
| 6. Stomach, Liver, &c. | 51 |
| 7. Diseases of the Kidneys, &c. | 10 |
| 8. Childbirth, Diseases of Uterus, &c. | 9 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 6 |
| 10. Skin..... | 0 |
| 11. Premature Birth..... | 0 |
| 12. Old Age | 31 |
| 13. Sudden Deaths..... | 5 |
| 14. Violence, Privation, Cold, &c.... | 17 |

The following is a selection of the numbers of Deaths from the most important special causes:

| | | | |
|--------------------|----|------------------|----|
| Small-pox..... | 27 | Convulsions..... | 29 |
| Measles..... | 31 | Bronchitis | 4 |
| Scarlatina | 13 | Pneumonia | 4 |
| Hooping-cough | 36 | Phthisis | 12 |
| Diarrhœa..... | 53 | Lungs | 1 |
| Cholera..... | 9 | Teething | 11 |
| Typhus..... | 28 | Stomach | 5 |
| Dropsy | 7 | Liver..... | 10 |
| Hydrocephalus | 17 | Childbirth | 4 |
| Apoplexy | 13 | Uterus | 4 |
| Paralysis | 10 | | |

REMARKS.—The total number of deaths was 4 *above* the average mortality of the 28th week of *ten* previous years.

METEOROLOGICAL SUMMARY.

| | |
|---|-------|
| Mean Height of the Barometer | 29.77 |
| Self-registering do. ^a | 59.6 |
| Thermometer ^a | |
| Max. 96° Min. 35° | |

^a From 12 observations daily. ^b Sun.

RAIN, in inches, .66. — Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 1.5° *above* the mean of the month.

NOTICES TO CORRESPONDENTS.

“Anti-acrimonious.”—The letter complained of was written in bad taste, and with bad feeling. It is more condemnatory of the writer than any remarks we could make in commenting upon it.

The communications of Dr. G. A. Rees and Dr. Fearnside will be inserted next week.

RECEIVED.—Mr. C. S. Bute—Mr. Chas. Stuart—Mr. J. L. Milton.

Lectures.

LETTSOMIAN LECTURES,
ON SOME OF THE PATHOLOGICAL
INDICATIONS OF THE URINE,
(Delivered before the Medical Society of
London,)

By G. OWEN REES, M.D., F.R.S.

Fellow of the Royal College of Physicians; Assistant Physician to, and Lecturer on Materia Medica at, Guy's Hospital, &c. &c.

LECTURE III.

Albuminuria—drain of albumen—serous effusions considered generally—drain of extractive matters of blood shown in the urine, a probable cause of anæmia—considerations with respect to the proportion of water in the blood as affected by disease.

MR. PRESIDENT AND GENTLEMEN,—In my last lecture I stated to you several objections which had been raised against the value of the diagnostic sign of albumen in the urine. These objections consisted in statements referring to the production of albuminuria by the ingestion of certain articles of diet, by the exhibition of diuretics, and of mercury in frequent doses and in quantity sufficient to produce salivation. I pointed out to you how experience had shown the falsity of this view.

I have now to bring before your notice certain statements referring to the production of albuminuria by other diseases than those of the kidney. This is an important subject, inasmuch as, were all that has been said founded in truth, the presence of albumen in the urine would become but an insecure diagnostic mark of renal disease. From the experience I have now had for many years at Guy's Hospital,—an institution in which the study of the urine have been closely followed ever since the date of Dr. Bright's discoveries,—I have become satisfied that its presence in the urine must be regarded as most significant; that continued albuminuria, unconnected with lesion of the structure of the kidney, is rare, and that an error has been promulgated by the imperfect chemistry of those observers who have arrived at the opposite conclusion.

This view receives confirmation when we consider the class of cases which have been described as characterised by an albuminous state of urine, and also from the fact that in most cases quoted the reactions

of the urine have been very imperfectly given. Thus, in cases of typhus, and also in typhoid fevers, the urine has been regarded by some as albuminous, because it was precipitable by nitric acid. I have myself frequently observed this reaction to take place in certain conditions of fever, and also in small-pox; but, so far from the precipitate containing albumen, it is entirely made up of lithic acid. Again, urine in the above cases has been described as coagulable by heat, and therefore as containing albumen, which is by no means a necessary conclusion. The phosphate of lime is frequently thrown down from urine on boiling it, and so completely does it then resemble albumen, that I have known the most practised deceived by the resemblance, until they had recourse to other tests with the view of verifying the reaction.

But with respect to the immediate question, whether or not we are to conclude, when albumen exists in the urine, that the patient is necessarily the subject of the morbus Brightii, it may be stated that we cannot arrive at such conclusion at once, for other conditions besides the morbus Brightii will produce albuminous urine,—viz., puerperal fever, cholera Asiatica, pyelitis, and inflammation of the urinary mucous surfaces generally: albumen will also sometimes appear in the urine immediately before death in a variety of diseases, and also now and then during gestation.

The distinction in three of the above described conditions can be easily made. Thus the symptoms of puerperal fever, and cholera, and gestation, are not such as to be mistaken for the morbus Brightii.

With respect, however, to pyelitis, or that inflammatory condition of the urinary mucous surface, extending to the kidney, which is characterized by a discharge of pus, the distinction is not quite so easy. Pus, as you know, consists of a fluid containing a number of corpuscles in suspension. The fluid in which these float contains albumen, and when the kidneys or urinary passages secrete pus, it becomes mixed with the urine, which it renders albuminous.

Thus, in inflammation of the mucous membrane lining the pelvis of the kidney and the urinary tubes, or in inflammation of the lower portions of the urinary mucous membrane, albuminous urine may exist. Though the general symptoms will by no means always assist us to discriminate between these states and the morbus Brightii, the microscope and chemistry will generally easily solve the difficulty. The nature of the deposit must be examined, and we shall find the pus corpuscles present in quantity if the albumen in the urine depend on the above-mentioned causes, and not on kid-

ney disease. The microscope will then detect the pus corpuscles in the deposit. An excellent test for pus consists in the addition of liquor potassæ to the urine, when the deposit, if it be pus, is at once converted into a mucous fluid. This, when poured out from a vessel, exhibits its glairy character. This test was proposed by my friend and colleague Dr. Babington, and is often very useful in the extemporaneous examination of urine. Urine which is albuminous from the existence of Bright's disease, is also nearly always of a light specific gravity; and this is an important point to remember.

In any case in which the albuminous urine contains a deposit of pus, however, we must rather look to the mucous tissues of the kidney, and the membrane lining the bladder and urinary canals.

It not unfrequently happens that the cystitis consequent on calculus in the bladder produces purulent and albuminous urine, and there is then some difficulty in ascertaining whether that form of degeneration characteristic of Bright's disease may not be affecting the kidney at the same time. This is a point of some importance as regards the prognosis of the case, for if the kidney be so diseased the patient scarcely ever recovers from the operation of lithotomy.

It is necessary to obtain the urine free from pus before we can speak with anything like certainty in these cases. If we can succeed in doing this by means of demulcents and astringents, in conjunction with alkaline remedies, then we may proceed to examine the urine with some hope of arriving at a conclusion. If, for instance, the albumen leaves the urine in proportion as it becomes free of the deposit of pus corpuscles, and if, on the disappearance of the pus, the albumen cease to be present, then the albuminous urine was unconnected with the morbus Brightii. If on the contrary, however, the disappearance of the deposit of pus leaves the urine still impregnated with albumen, then the morbus Brightii is probably present, and we ought to give an unfavourable prognosis.

Attention to this point is of vast importance, and I have known more than one case in which much disappointment and chagrin might have been spared the surgeon, had care been taken to inquire into this matter.

When albumen, then, exists in the urine, *without pus or blood* to account for its appearance, we may conclude that the patient is the subject of one of those forms of degeneration known as the morbus Brightii, provided we have excluded puerperal fever, gestation, and cholera, as possible causes. It must be remembered that bloody urine will occasionally be passed in Bright's dis-

case; but the prominent and continuing characteristic is the secretion of an urine containing the serous part of the blood *only*, and when red blood corpuscles are to be seen they appear but for a day or so, and then the urine returns to its purely albuminous state. In the slight notice I am here able to give of the morbus Brightii, I must omit the general detail of symptoms. I cannot refrain, however, from mentioning to you one or two points with respect to diagnosis, which you will find of value. You may derive great assistance from the observation of the following symptoms, which, when present, should always lead to the examination of the urine for albumen:—

1st. A puffiness of the face observed in the morning.

2ndly. Frequent calls to pass water at night.

3dly. A tendency to swelling of the wrists, often attended with pain, but not of a rheumatic character.

4thly. Dyspepsia, attended with frequent nausea.

Do not expect always to find pain in the loins in Bright's disease. It is *sometimes* a symptom, but far from *always*, and I warn you of this, because the absence of that pain may distract your mind from the right line of thought, when examining the more insidious cases of the disease.

With respect to your prognosis, it is important you should remember that this disease is by no means necessarily fatal. Cases which are detected early are frequently cured, and those who suffer from the more advanced stages may be kept alive for years under judicious treatment.

One great point to keep in view, especially as regards the application of remedies, is, that the albumen passing away by the urine is impoverishing the blood, and not only thus decreasing the proportion of albumen, but likewise interfering with the formation and development of the red corpuscles, so that patients become rapidly anæmiated.

The relation between the contents of the red corpuscles and the chyle becomes changed in consequence of the drain of albumen lessening the specific gravity of the liquor sanguinis, in which the corpuscles float. Now the chyle supplies iron to the red corpuscles, and contains that metal dissolved in its serum for that purpose, and when in the healthy state the chyle enters the blood through the thoracic duct, it produces certain physical changes. The specific gravity of human chyle is about 1027; that of the fluid in which the corpuscles float is 1050 to 56; and the fluid contained in the corpuscles must of necessity be of the same specific gravity, in virtue of the

endosmotic law. When the chyle mingles with the liquor sanguinis then it lessens its specific gravity, and *in health* there is an endosmotic action exerted, which draws a considerable proportion of the chyle within the blood corpuscle, the law being that the heavier will draw the lighter to its own side of any membrane, in larger proportion than the lighter can draw the heavier.

It will be obvious now, that if we lessen the specific gravity of the fluid in which the corpuscles float *by abstracting its albumen*, we shall also lessen that of the contents of the corpuscle. The contents of that body will then approach to the specific gravity of the chyle, and that fluid will therefore enter the corpuscle the less freely, and there will be less iron supplied to it for its nourishment. Thus it is that anæmia, or a deficiency of red corpuscles, will always follow as a consequence of a drain of solid matter from the blood.

Now the point of treatment on which all this bears, is the propriety of doing all we can to render the blood as nearly as possible of its proper specific gravity. Owing to this drain of albumen there is an excess of water in the blood, and, as I have said before, the corpuscles subsequently become deficient. How are we to remedy this evil, and what remedies should we call to our aid? It is satisfactory to know that theory here suggests what experience has long ago discovered, viz., the use of hydragogue cathartics, vapour baths, and iron. I by no means recommend the indiscriminate use of iron. It is not admissible in the early stages of the disease when active symptoms are present. It must rather be looked upon as cinchona and quina are wont to be regarded in the treatment of rheumatism, and it must follow the antiphlogistic treatment recommended in class works on this subject. To its great value, however, in the anæmia caused by the morbus Brightii, all who use it will, I am persuaded, most readily testify. As regards the use of iron generally in anæmia, I must here beg your indulgence while I urge upon you to persevere in its use in spite of those occasional complaints on the part of the patient, which in most cases arise from the inconvenience experienced from changes of temperature, or moisture, or errors in diet. It is not uncommon to hear it stated that iron does not agree in all cases of anæmia. It so happens that one of my duties at Guy's Hospital consists in seeing the female out-patients, and I doubt very much that any practitioner on the face of the globe orders as much iron as a medicine as I do; and I speak advisedly when I say that I scarcely ever knew a case in which I had to withdraw its exhibition, and that I never knew

a case of chlorotic anæmia in which it did not prove of eminent and marked service.

I have had complaints during the progress of the case of headaches and restlessness, but have always found a purge and perseverance in the iron effect a cure. If you desist from its use for every change of weather which may for a time further relax the system and ruffle the temper (especially that of the more susceptible sex), your difficulties will never cease, and your only consolation will be, that most imperfect one, the multiplication of your fees; for you will retard the progress of the patient's cure very materially. Persevere—abstract the excess of water from the blood by saline purges, and afford the stomach every opportunity of introducing iron into the system.

I have now treated of the symptom of blood in the urine, and noticed the pathological deductions we are entitled to draw from its presence, whether all the constituents of blood are present producing hæmaturia, or when the serum of the blood alone is mingled with the urine. I now wish to bring before your notice another kind of effusion from the renal secreting surface, an effusion not of blood, nor of the serum of the blood, but of some of the *components of serum*; and as it is a subject which has not yet been investigated by the profession in consequence of the difficulty felt in recognising the urinary symptom, I hope I shall be excused while I urge the importance of studying it. I shall do this by first arguing theoretically upon the probable truth of my position, and then proceed to show you how that position is strengthened by chemical and pathological facts.

Keeping in view, then, that the renal surface has been proved subject to an effusion of serum under special conditions, let us now look into the general question of effusion, and the constitution of the various fluids poured out in different parts of the body, and remember how the constituents of the blood are found to divide themselves to form fluid deposits in disease. Taking the chemical history of serous effusions generally, we shall find that in pleuritis and peritonitis of an acute character a fluid is poured out characterised by the presence not of the entire blood, nor yet of the serum, but that the liquor sanguinis is poured out, and that this separates after its effusion into serum and fibrin; the former forming the effused fluid, and the latter depositing in those various forms known as plastic matter, false membrane, &c. Again, serous effusions, especially when of a passive character, are characterised by the absence of fibrin. In fact, serum and

not the liquor sanguinis is effused, and this form of effusion varies greatly in its specific gravity. It may contain a larger or a less quantity of solid matter, and a larger or less quantity of albumen. Now, if we look to the more delicately constructed serous membranes, we find conditions which but rarely pertain under inflammations of the pleuræ or the peritoneum. And it is with these more delicate membranes, such as the arachnoid, both in the brain and as it surrounds the spinal cord, that we may more justly make comparison with the secreting surface of the kidney. The effusions into these membranes, though they occasionally contain both fibrin and albumen,—that is to say, though they may deposit plastic matter, and be coagulable by heat, are more commonly constituted of those parts of the blood denominated extractive matters, and which exist in combination with the various alkaline salts of the blood. This is especially the case when the inflammation producing the effusion is of a chronic or subacute character; when the blood merely pours out its water, extractives, and salts. In some cases of arachnitis I have known the fluid effused to consist almost entirely of water, the evaporation of half a pint of it yielding scarcely any residuum. Thus, so far as the chemical history of effusions can assist us, we perceive that the blood may cast off—1st, water alone; 2dly, water, extractives, and salts; 3dly, water, extractives, salts, and albumen; 4thly, water, extractives, salts, albumen, and fibrin.*

In applying what I have now described to you as the results of analysis to the consideration of urinary pathology, you will at once perceive that as we have the serum of the blood effused by the kidney in certain diseased conditions, analogy suggests the probability that there may be some pathological states in which the extractives and salts only may be effused in the urine with the water of the blood, the albumen not appearing.

The subject having presented itself to my mind as I have now described it to you, I determined, a few months ago, on making some observations on the patients at Guy's Hospital, with a view, if possible, of determining whether such a drain of the extractive matters of the blood really ever took place,—whether, in fact, the blood were thus sometimes losing its solid constituents in a form we had not yet learned

to recognise for want of proper chemical tests of its presence. We possessed ample means of detecting the serum of blood when present in the urine from the reaction afforded by the albumen; but the question now was—How could we detect the extractive matters and salts, which are not only colourless, but very nearly resemble in their chemical reactions the extractive matters naturally existing in the urine? Considering this question, it occurred to me that one of the extractive matters of the blood was precipitable by the tincture of galls; whereas the extractives of the urine possessed this quality in but a slight degree. It became, therefore, a matter of interest to determine in how far this test was capable of making pathological distinctions, and whether the presence of the extractives of the blood in the urine without albumen were significant of any particular disease or of any class of diseases. It struck me that if the analogy between the effusion of serum by inflamed serous membranes and by the secreting surface of the kidney held good, we ought always to find the extractives of the blood effused into the urine with the albumen in albuminuria, as this always happens when albumen is present in ordinary serous effusions. To determine this, my first experiments consisted in testing albuminous urine with the tincture of galls. I began by separating the albumen by brisk boiling and filtration; and having ascertained that the filtered fluid no longer contained any of that principle, I then tested it by the tincture of galls to see if the extractives of blood were present, and had coexisted with the albumen. The test gave, in all these cases of albuminuria, a most abundant precipitate, showing the analogy between the effusion which occurs in the morbus Brightii and that observed in serous membranes. My object being so far attained, I now proceeded to construct a table which should show the reaction of the urine in such cases as I could obtain among the patients in Guy's Hospital. I had a column devoted to the test by boiling, and another to the test of nitric acid, so that I might be able to exclude from the consideration all cases distinguished by the presence of albumen. A third column showed the reaction of the tincture of galls. As the labour of collecting and weighing the precipitates would have been great, and, moreover, unnecessary in these comparative experiments, I employed three terms to describe the amount of coagulation produced by the test. The first degree was designated "copious;" the second, "considerable;" and the third, "slight." I was assisted in this work by two of my most intelligent clinical clerks, Messrs. Craweour and Bown; the cases being principally

* I would here refer those who may be interested in the question of effusions generally, to a most valuable paper on the subject, written some years ago by my friend, Dr. Babington, and published in the *Medico-Chirurgical Transactions*.

taken from the clinical wards. The general result shown by the table we used was—

1st.—That whenever albumen was present in quantity in the urine, it was always accompanied by the extractives of the blood in large proportion.

2dly.—That the cases in which the extractives of the blood were in the urine in large proportion were generally those marked by debility.

3dly.—That cases of anasarca, with disease of the heart, and *unconnected with albuminuria*, also showed the extractives of the blood to be excreted by the urine in quantity.

4thly.—That cases of chlorotic anæmia and hysteria gave copious precipitates.

5thly.—That when in albuminuria the albumen became deficient in the urine, which we know often happens in advanced cases, the blood extractives also decreased in quantity.

6thly.—That in cases of anæmia the proportion of blood extractives observed in the urine diminished as cure was proceeding under the use of ferruginous tonics.

The limited number of cases which have as yet been observed, and the extended nature of the inquiry, make it right that we should be careful in drawing conclusions. I think, however, we may safely state that we have already proved beyond a doubt that in certain diseased conditions an important drain upon the blood is going on, of which we have been totally ignorant up to the present time.

That urines vary in their reaction with regard to any test, would be in itself enough to shew the importance of analysing the fact; but when we remember that tincture of galls is the precipitant of one of the extractives of the serum of blood, and that albuminous urine containing the serum of the blood gives the most copious result when tested by galls, we must at once admit that the blood is becoming disintegrated when the urine is precipitable by the tincture, and feel the propriety of watching this source of waste in those forms of disease in which it may hereafter be proved to exist. From what I already know, I think we may confidently hope, at no very distant period, to connect this effusion of the blood-extractives into the urine with a peculiar state of kidney—a condition producible, probably, by more than one pathological action, but one which it is highly necessary to counteract in all. We may consider that a new symptom has been afforded us by chemistry: it remains for us, however, to ascertain its precise value, by determining the correct interpretation to be put upon the indication.

When I was speaking of the anæmia

which occurred as a sequel to albuminuria, I explained how it was a necessary result of the impoverished state of the liquor sanguinis in which the corpuscles float. We see now, however, that a drain may go on from the liquor sanguinis by its *extractives passing away by the urine*, without any albumen appearing, and that we may thus have another cause for the appearance of anæmia besides that of a drain of albumen; for the extractive matters tend greatly, by their presence, to keep up the specific gravity of the blood. Reflecting upon this, it occurred to me that, in some of those cases of anæmia in which we entirely fail to detect any adequate cause for the symptom, we might perhaps find that the blood became impoverished by the extractives passing away in the urine; this deterioration of the liquor sanguinis being followed, as in the case of albuminuria, by the destruction of the corpuscles.

This is a point deserving of attention; but at present I can do no more than direct the attention of practitioners to the investigation of such cases with relation to the condition of the urine. My friend and colleague, Dr. Addison, has shown that the renal capsules become implicated in this form of disease—a fact of some interest in connection with what I have above stated. It may be well to mention that, in a case of diabetes insipidus, I lately found the blood extractives coming away in very large proportion.

I would not wish it to be supposed that I attach an undue importance to this symptom of urine being precipitable by tincture of galls. The urine of those whose condition approaches to perfect health will often show traces of the presence of the extractives of the blood; and I have reason to believe, that whenever, from hard labour, mental or physical, a certain amount of anæmia follows, the urine will be found impregnated with these extractives. Perfectly healthy urine, however, shows but a slight precipitate on the addition of the tincture.

It is absolutely necessary to remember, in applying this test, that the reaction to be observed is that which immediately follows the addition of the galls; for, if we wait, we almost always get a considerable precipitate; the earthy and potash salts coming down, owing to the precipitating action of the spirit contained in the tincture, and probably other changes occurring.

What we already know, then, of this indication only goes so far as to show that it is the continuance and excess of the discharge of blood extractives that must make us anxious, and that, like the pre-

sence of oxalate of lime crystals in the urine, it may often exist without any material variation from the healthy state. Like oxaluria, however, it is an indication that requires watching; and I believe further research may show it to be still more important than we are entitled to declare it in the present state of our pathological knowledge.

Proceeding on the assumption that the secreting surface of the kidney is subject to the same laws with respect to effusion which regulate serous membranes, and taking the arachnoid membrane as the type, I now proceed to consider that condition of the kidney in which an excess of water is poured out with the urine.

Let us first consider the uses of water in the blood, the ends answered by its presence, the necessity for its frequent removal, and for the supply of fresh water to the system.

The first and most obvious use of water in the blood is to maintain its fluidity, and thus to enable various salts and other matters to be presented to the organs in such form as to enable their particles to receive the impress of chemical and probably electrical actions in a minuter state of division than can be compassed by other means. As regards the action of water in the blood, in its relation to the kidneys and the skin, we must especially regard the following points:—1st. The density of the blood is, in health, nearly always the same; and a large excretion of water calls for immediate supply of a like quantity to the blood; and this happens whether the excess of water have escaped by perspiration or in the urine. 2ndly. The changes which take place in the blood, more especially those of oxidation, and the formation of the alkaline phosphates and sulphates by the union of oxygen with the phosphorus and sulphur contained in the albuminous matters taken as ingesta, require water in order to wash away the salts formed as the result of this action.

Now there is a constant necessity for a supply of water to keep up the specific gravity of the blood, and to wash away the oxidated products as they are formed, whenever, from disordered action, the kidneys allow the water of the blood to pass away in the urine in large quantity. The sensation of thirst occurs in all such forms of disease, and its satisfaction is necessary in order to preserve the integrity of the blood. It is true that the skin in excessive diuresis is dry, and that cutaneous transpiration is either lessened or altogether ceases; but the water which is retained in the blood by this action is by no means sufficient to compensate for the abstraction of water which goes on in

nearly all cases of diabetes, whether saccharine or insipid. The guide for the necessity of supply is the sensation of thirst, and it should always be gratified; for, on whatever conditions the diabetes may depend (and, unfortunately, we are as yet greatly in the dark with respect to the pathology of this most interesting disease), it will be in vain to hope to treat it if we do not keep the blood up to its normal standard by supplying water to it at any moment it may be required. Let us think how the blood must suffer in those cases of diabetes, far from uncommonly met with, in which the urine amounts to eight and twelve pints in the twenty-four hours. Let us reflect on what the person who is the subject of disease must lose in water during the twenty-four hours. We may allow two and a half pints for urine, and two and a half pints for cutaneous transpiration, and we shall see then that the diabetic loses more than three pints per diem extra, assuming that his skin is absolutely inactive, which is rarely the case. Now six tumblers of water, or thereabout, taken during the twenty-four hours, is a very large quantity, but, I do not scruple to say, is seldom more than necessary to keep the blood in a proper state in diabetes, where eight pints of urine pass per diem.

There is a fear often expressed by practitioners that allowing the patient to drink irritates the kidneys, and so keeps up the flow of water—in fact, that the more the patient drinks the more urine passes. This is true if fluids be taken beyond certain limits, but it does not act materially when fluid is taken so as to satisfy thirst; and I have always seen greater improvement take place where this boon was granted to the patient; and everything we know of the blood, and the necessity of maintaining it at a certain fixed specific gravity, points to the propriety of allowing it.

Having alluded to diabetes in this manner, it might be supposed that I regard that disease as an effusion of water by the secreting surface of the kidney. Should such a condition obtain, however, it can only be a diseased state induced secondarily upon other evils more nearly connected with disturbance of the chylipoietic organs, and probably the brain. It is not my intention, however, to enter upon this subject, but merely to suggest that analogy would seem to point to the probability of an occasional increased flow of water from the kidney, as the result of some secondarily induced disease of its secreting surface.

Original Communications.

ON

ABSCESES OF THE ANTERIOR ABDOMINAL WALL.

BY J. MANLEY, M.D.

Physician to the City Dispensary.

*(Read before the Abernethian Society,
March 6th, 1851.)*

OF abscesses of the abdominal parietes Prof. Velpeau* remarks that they present so many varied points for consideration, (tant de nuances à étudier), that a special treatise would be required to elucidate all their peculiarities. A no less eminent authority, in this country—Mr. S. Cooper†—says “that abscesses between the peritoneum and abdominal muscles, or between the layers of these muscles and under the integument, are attended with considerable variety, according as they happen to be acute or chronic, circumscribed or diffused, small or extensive.”

The object of the present communication is to call attention to those abscesses only of the anterior abdominal walls which are situated in or near the umbilical region. The following history of a case which last year fell under my observation may serve as introduction:—

Sarah Collins, ætat. $3\frac{1}{2}$, a child of dark complexion, well developed, with a fair proportion of adipose tissue, but of a somewhat lymphatic appearance, and with a naturally tumid belly, came under my care, at the City Dispensary, in the beginning of January 1850. She had been an out-patient since June 6th, 1849, presenting, as far as could be ascertained from the mother's imperfect report, symptoms of hectic fever,—viz., gradual loss of flesh and strength, with thirst and hot skin, but from what cause did not appear: during this state the bowels were reported to have been regular. Towards the middle of December, 1849, and when her recovery was considered nigh complete, her health again began to decline, and she frequently

complained of pain in the abdomen, which became tense and swollen; the pain increased in severity, and, about a fortnight after the tumefaction of the abdomen had first attracted notice, a copious discharge of purulent fluid took place spontaneously through the umbilicus: this has continued up to the present time (Jan. 14th). On examination, the umbilical region is found to be full and prominent; the integument has a dusky brown colour, as commonly observed in the vicinity of an abscess of some duration; a discharge of purulent fluid, not exactly homogeneous, and of a yellowish colour, arises from the centre of the umbilicus, which no longer presents the usual depression, but is pouting, and has the same dusky brown-red colour as the surrounding integument. The quantity of discharge is now moderate. On pressing the swelling close to the umbilicus, pus is poured out in a thick stream through the fistulous opening, accompanied by small bubbles of a gaseous fluid. This circumstance presented itself twice during the examination: it had never been observed by the mother, probably from her never having attempted to make any pressure on the tumour. Pressure not only increased the discharge, but showed, also, that the pus did not come from the immediate vicinity of the umbilicus, but at some distance to the right of it, where, about midway between the navel and the anterior and superior spine of the ileum, an indurated spot could be distinctly felt through the abdominal walls. Upon continuing the pressure from this spot towards the fistulous opening, pus and gas-bubbles escaped in greater quantity: the pus had no fetid odour. The fistulous opening was small, and was situated on the summit of a papilla-like process occupying the centre of the navel: into it a probe could be introduced; but at no time did I attempt to ascertain to what depth or in what direction the instrument could be passed, from a fear of doing mischief, and from the conviction that no useful information could be obtained by the experiment; not following in this respect the precept laid down by Celsus, who, speaking of fistulæ in general, says*—“ante omnia demitti specillum in fistulam convenit, ut quo ten-

* Leçons de Clin. Chir., tom. iii. p. 377, Paris, 1841.

† Dict. of Pract. Surg., p. 3, 7th edit., London, 1838.

* Corn. Cels. de re Med., lib. v. cap. ii. Sect. xiv.

dat et quam altè perveniat, scire possumus." On endeavouring to determine the seat of the induration, I remarked that it was evidently not situated in the subcutaneous cellular tissue, as this, which was of some thickness, could be grasped and raised over the swelling.

Feb. 11th.—The induration can still be felt in the right lateral region of the abdomen, all the other parts of which are in a natural state. The discharge persists, increased by pressure, is somewhat thinner: no escape of gaseous fluid at this examination.

April 8th. — The child was again brought to the Dispensary, the mother having perceived, a day or two back, that the navel pouted again considerably, was red and tense, and the child suffering a fresh accession of pain. She was on the point of applying a poultice, when a large quantity of pus escaped.

Since the last report the fistula had for some time ceased to discharge, although the appearance of it seemed to indicate that it was not permanently closed. The discharge is at present as abundant as at the commencement; the fluid yellowish, but thin. There is still considerable induration to the right of the umbilicus below the right hypochondrium. Pressure from this point towards the umbilicus determines an increased flow of pus, as in former examinations: no escape of bubbles.

30th.—The discharge persists, although again less abundant. The induration can be still distinctly felt.

May 16th.—Still some discharge; is, however, much thinner.

June 10th.—Slight suppuration from the fistula.

July 1st.—No trace whatever of discharge; the umbilicus is perfectly dry, and somewhat puckered, and has no appearance of the persistence of the fistulous opening. No distinct and circumscribed induration can now be felt where it formerly existed, although, upon deep depression of the abdominal wall, something of a cord-like substance is found.

15th.—The closure of the fistula appears now to be permanent, and the umbilicus has resumed its natural appearance: as at last examination, something like the vestige of an inflammatory induration can be felt by forcible depression of the abdominal wall: this pressure causes no pain. The child was discharged.

When the child first came under my care in January, I found that she had been taking the *Ol. Jec. Aselli* since the occurrence of the suppuration (one month). Under the influence of this remedy the mother stated that she had gained flesh; it was therefore continued up to May 16th, when it was thought proper to leave off all treatment. The child continued to enjoy good health during the whole period she was under my care, eating with appetite, and taking exercise, and, with the exception of the recrudescence already alluded to, suffered no pain. The local treatment consisted in poultices and simple dressing.

I may here mention that at no time did I detect any peculiar or fetid odour in the purulent fluid or in the gas; never, while the child was under my care, did the discharge contain faecal matter or intestinal fluid, nor did it appear to have presented any trace of them before the patient was seen by me. There likewise never appears to have been any pus in the stools, nor other circumstance to induce the belief of a communication of the abscess with any portion of the intestinal canal.

Examined upon two other occasions under the microscope, the purulent fluid presented pus-globules of a somewhat irregular form, and portions of it, thicker than the rest, and of a darker yellow colour, consisted of fat and oil-globules.

The preceding history presents many of the features of deep-seated phlegmon of the anterior abdominal wall; but, like all individual cases, it does not permit of drawing from it a general description: this can only be done by the collation of facts of the same order.

As superficial or subcutaneous abscesses of the anterior abdominal wall resemble similar collections in other parts of the body, they will require no especial notice. I may only mention that it was held by Delamotte, and after him by Boyer, that the inflammation of which they are the sequel is generally attended with more pain than in other regions, on account of the abundant supply of nerves to the abdominal parietes, and also on account of the repeated action of the abdominal muscles.

Of deep-seated abscesses of the anterior abdominal wall I may immediately remark that they may be situated either in the areolar tissue connecting the muscles and fasciæ, or in that external

to the peritoneum or fascia propria; but in most cases, if not in all, it is extremely difficult, not to say altogether impossible, to determine precisely the situation of the pus, whether immediately external to the peritoneum, or between the muscles and fasciæ. This circumstance, however, is fortunately of little practical importance, as the therapeutical indications are the same in either case.

In its incipient stage, deep-seated inflammation of the anterior abdominal wall not unfrequently presents, as might be expected, symptoms chiefly resembling those of acute peritonitis. It almost invariably terminates in suppuration, and the purulent fluid is frequently in so great quantity as to lead to the suspicion of ascites. The pus frequently makes its way to the exterior through the umbilical ring, rarely, but occasionally, into the peritoneal cavity, sometimes into the intestine.

It presents also, in some instances, a peculiarly fetid odour; a circumstance eminently conducive of error, if not understood. This character of the pus is, however, not peculiar to abscesses of the abdominal parietes, but is now well known to obtain in purulent collections situated in the immediate proximity of cavities containing atmospheric air or other gases.

As the pus collects, the unyielding nature of the tissues which form the abdominal wall prevents the abscess pointing readily; the tumour is more or less flattened, very tender on pressure, and the pain is increased still more in these cases than in superficial inflammation, by every act which calls the abdominal muscles into play.* After the evacuation of the pus, the effusion into the surrounding cellular tissue, which is generally very extensive, is tardy in disappearing, and indurated masses are felt through the abdominal wall.

Such are some of the more prominent features of abscesses of the anterior abdominal wall, which the following abstracts of cases will serve to illustrate.

In the *Archives Gén. de Médecine*, Ser. iii., p. 435, 1839, M. Bricheteau has published the following very interesting case, in which, it will be seen, the symptoms strongly resembled those of acute peritonitis:—

The patient was a young lady, æt. 17,

of lymphatic habit, and who in her infancy had presented decided symptoms of struma. On the 17th of May, 1839, she was seized with violent pain in the abdomen, which lasted throughout the night, and entirely prevented sleep. The following night was equally bad. The author was called in on the second day, when, on examination, he found the abdomen generally painful, and intolerant of the slightest pressure. The skin, however, was scarcely hot, but the pulse somewhat accelerated. There was much restlessness; but the countenance was not altered. The patient was troubled with repeated bilious vomiting. Leeches, baths, fomentations, &c., were employed, and a mixture containing Tinct. Opii, to restrain the vomiting, and to appease the extraordinary restlessness, which was most distressing. These means continued during some days, with the exception of the leeches, were attended with apparent success. The abdominal pain yielded; the vomiting ceased; and pressure no longer caused pain: nevertheless the pulse remained frequent—at 120; the respiration accelerated, 44 inspirations per minute. But at the expiration of a week things looked favourably, and some broth, for which the patient expressed a strong desire, was allowed: this was followed by a return of the pain, with tension and tympany of the abdomen, vomiting, frequent pulse, and other febrile symptoms. The leeches and other antiphlogistic means were again resorted to, and soon this second attack in great measure abated; but the vomiting did not cease altogether, and the pulse varied from 120 to 140. On the 1st of June the patient was seen conjointly by Bricheteau and Marjolin, when they both thought they detected fluctuation; and the case was considered to be effusion consequent on peritonitis. Marjolin moreover suspected the presence of tubercle in the peritoneum.

About the 12th it was observed that the integuments at the umbilicus were thinner than usual, and pouted somewhat; the abdomen was resonant on the left, and dull on the right side.

On the 14th, the patient complaining of feeling wet, the poultice was removed, when a jet of pus escaped through the umbilicus, which had given way: the quantity collected was estimated at several basinsfull. This discharge was, as after tapping for dropsy, followed by

* Dance, in *Dict. de Méd.*: art. Abdomen.

syncope, which was, however, of short duration: after it, the patient fell into a quiet sleep. The pus was thick, creamy, without odour,—similar in all respects to that of an ordinary phlegmonous abscess. The following day the patient was easy, and had passed a good night. The abdomen was considerably diminished in size, and tolerant of pressure; pulse down to 98. The suppuration was extremely copious; the bed-linen was saturated with pus. There was still some nausea and occasional vomiting, with partial cold sweats. Strengthening diet was ordered.

On 20th the abscess ceased to discharge during thirty-six hours, when the pus again escaped after some violent abdominal pain: the pulse again rose to 120.

26th.—There was great restlessness; delirium, with some vomiting; the pus had again ceased to flow.

29th.—The patient was once more restored to quietude; the abscess no longer discharged, but the urine, for the first time, presented a copious mucous sediment; the pulse was still at 120. She continued in this state, with some variations and occasional vomiting, until July 8th, nearly two months from the commencement of her illness. Her convalescence appeared now to be certain; the pulse was down to 98. No accident occurred after this date; and in October, on her return from the country, she was enjoying perfect health.

This case, the author remarks, was well calculated to lead into error, from the close resemblance of many of its leading features to those of acute peritonitis—viz., the severe abdominal pain, increasing on the slightest pressure; the tympany and tension of the abdomen; the acceleration of the circulation and respiration; the repeated vomiting; and, in addition to these, and as a sequel to them, the sensation of fluctuation obtained on the 17th day from the commencement of the attack, which might very naturally be considered to be dependent on effusion into the cavity of the peritoneum. So strongly, indeed, did the case resemble an attack of acute peritonitis, as to lead into error so sagacious and experienced a practitioner as the late Professor Marjolin. In this instance, notwithstanding the discharge was most profuse, the abscess was doubtless circumscribed by the salutary adhesive inflammation, and the disease

by this means limited to a portion only of the cellular tissue external to the peritoneum. In less fortunate cases the inflammation involves the entire layer of the fascia propria, which is found separated from the posterior aspect of the abdominal muscles by a layer of pus. An example of this severe form of phlegmonous inflammation of the abdominal parietes has been published in the same periodical—*Les Arch. de Méd.* for 1841, by Dr. Néret, physician to the hospital at Nancy.

The patient was a girl, æt. 15. When first admitted, she was suffering from leucorrhœa, great tenderness of the lower part of the abdomen, and rather profuse diarrhœa: these symptoms were relieved by quietude and mild antiphlogistic remedies. On leaving the hospital the abdomen was soft and retracted, scarcely painful on pressure, and her general health much improved. But shortly after her return home, she relapsed; the abdomen again became extremely painful, and increased considerably in size. She was readmitted two months after her first discharge; the abdomen was then found to be much swollen and painful; percussion gave the sensation of a fluid, which there was every reason to suppose was situated in the cavity of the peritoneum: close to the umbilicus there was an opening resulting from an incision which had been made two days previously into a fluctuating tumour, out of which a serous fluid had escaped. After admission, this opening continued to discharge for some days; first a large quantity of serum, and afterwards a still larger quantity of a whitish purulent fluid of tolerable consistence. The situation of this collection appeared to be the umbilical region, as the flow of pus was increased by pressure in the two hypochondria. This discharge, however, ceased, and the abdomen diminished in size; but a few days after, a round tumour, similar to the bladder distended by urine, was perceived in the hypogastric region: catheterism had no effect in reducing its size, and only a small quantity of water was drawn off; but it subsided considerably on the reappearance of the discharge at the umbilicus, and which evidently had its source in the hypogastric tumour, as was proved by pressure on this part. Hectic symptoms set in, and death took place at the expiration of six-and-twenty days.

At the post-mortem examination the whole extent of the parietal layer of the peritoneum was found separated from the posterior aspect of the abdominal muscles and fascia by a layer of pus; the external surface of the serous membrane was of a greyish colour, thickened and granular. At the lower part of the abdomen, and in the pelvis, this same external surface had contracted adhesions with the neighbouring parts, and in this manner formed pouches or cysts, some of which contained serum, and the others purulent fluid.

One of these cysts, of large dimension, was situated in the region of the bladder; but this organ was healthy.

In the cavity of the peritoneum there was found neither serum nor pus, but the intestines, especially in the lower part, were adherent one to another, and to the omentum. No communication whatever was found to exist between the cavity of the peritoneum and the parts external to it.

In this case the inflammation in all probability originated in the cellular tissue of the fascia propria, where it soon arrived at the period of suppuration, and was ultimately propagated to the inner surface of the peritoneum, where it did not go beyond the adhesive stage.

In the following history of abdominal inflammation abridged from Hunter, and which is related by him as an instance of what he has termed the relaxing process, the succession of morbid phenomena appears to have been the same, although the effects produced were not quite similar, and still more destructive.

A boy about thirteen years old was attacked with a violent inflammation in his belly, without any apparent cause. The usual means were used without effect. His belly began to swell in a few days after the attack. In several places there appeared a pointing as if from matter; one of those which was just below the sternum became pretty large, and discoloured with a red tint. Although there was no perfect fluctuation, yet it was plain there was a fluid, and most probably from the pointings it was matter in consequence of inflammation, and was producing ulceration on the inside of the abdomen for its exit.

Hunter therefore made a small open-

ing into the pointing part just below the sternum, hardly an inch long. There was immediately discharged by this wound about two or three quarts of a thin bloody matter: the swelling of the abdomen subsided, but the patient lived only about sixty hours after the operation.

On opening his abdomen, little or no matter was found lying loose; all had made its escape through the wound. The whole intestines, stomach, and liver, were united by a very thick covering of the coagulating lymph, which also passed into all the interstices between them, by which means they were all united into one mass. The liver adhered also to the diaphragm; but none of the viscera adhered to the inside of the belly on its fore part, for there the matter had given the stimulus for ulceration, which prevents all adhesions. The process of ulceration had gone on so far as to have destroyed the whole of the peritoneum on the fore part of the abdomen, and the transversalis and recti muscles were cleanly dissected on their inside. The tendons of the lateral muscles that pass behind the heads of the recti were in rags, partly gone, and partly in the form of a slough.

In the works of some of the older surgical writers, histories are recorded of large collections of pus formed in the abdominal parietes, and accompanied with symptoms similar to those of acute peritonitis. Delamotte relates the case of a soldier who was seized with a pain that extended over the whole surface of the abdomen, so intense that he could scarce bear the pressure of his linen. He was bled, fomented, &c. At the expiration of ten days the pain was still very severe, and a small tumour appeared in the upper and right lateral portion of the hypogastric region, with redness of the integument and fluctuation. It was opened with the knife, and a surprising quantity of pus escaped, and continued to do so for some time; but the patient recovered.

CASE LII., from the same author, is an instance of suppuration of the abdominal wall occurring after parturition. Five days after the birth of twins, and the operation of turning to deliver the second child, the patient experienced a sudden and great fright,

and exposed herself to cold. Soon after she was seized with rigors, followed by intense febrile action. The lochial discharge was completely arrested, and the whole surface of the abdomen became tense and excessively painful. Bloodletting, fomentations, emollient enemata, were used to moderate the fever and pain, which lasted during forty days with considerable intensity. At the expiration of this time, Delamotte, who, on account of the distance, could not visit his patient daily, found that the integuments had given way about four fingers' breadths above and to the side of the umbilicus; and through the opening an immense quantity of pus escaped (*un seau de pus*, a bucket-full of pus: such are the author's words). After this the patient was much relieved, and speedily recovered.

From the remarks appended to several of his cases, Delamotte was evidently of opinion that the purulent collections were located within the peritoneal cavity, and he supposed that he had frequently opened the abdomen with impunity. But Sabatier, who gave a corrected edition of his Treatise on Surgery, observes that in none is there any proof that this was the case; and he considers that these were simply instances of abscesses in the areolar tissue external to the peritoneum, or perhaps only in that which exists between the layers of the abdominal muscles. Sabatier grounds his opinion principally on the rapidity with which the patients recovered after the evacuation of the pus.

The umbilicus is not unfrequently the seat of fistula. Pus from abscesses of the liver, hydatids from cysts of the same organ, and gall-stones, are occasionally discharged at this point of the abdominal wall; also, although much more rarely, the urine and calculi from the bladder. Again, faecal matter, from a communication with the diverticulum ilei, as in the cases related in Guy's Hospital Reports, 1843, by Mr. T. W. King. Lastly, the fluid of ascites, whether general or encysted, and the pus of encysted abscesses of the peritoneum, and of abscesses of the abdominal parietes, &c.

Some of these varieties of fistula, especially those first mentioned, may perhaps be explained by the presence

of the suspensory ligament, which, as remarked by Professor Bérard,* guides towards the umbilical ring the contents of hepatic tumours. The non-obliteration of the urachus, or its reopening from retention of urine, explains the passage of this fluid and of vesical calculi; but I can find no satisfactory explanation for the discharge at this spot of the pus of simple abscesses of the abdominal wall situated outside the peritoneum, especially when the seat of the suppuration, as in the case I have related, is at some distance from the umbilicus.

[To be continued.]

ON
INFANTILE REMITTENT FEVER,

WITH ESPECIAL REFERENCE TO ITS
DIAGNOSIS FROM HYDROCEPHALUS.

By CHARLES TAYLOR, M.R.C.S.

Late Surgeon to the Royal South London
Dispensary.

[Continued from p. 55.]

C. *The liability of Hydrocephalus to arise in the course of an attack of Remittent Fever.*

THIS is a not unfrequent occurrence, and one which all bear testimony to, and which our every-day practice illustrates, occurring more especially in the course of the chronic and gastric forms.

A child in whose family there is perhaps an hydrocephalic tendency, gets an attack of remittent fever, and, owing to a variety of circumstances, it becomes chronic; or it may be the cerebral mischief is excited during the early and more acute stage of the disease: as the case progresses, the delirium which occurs at night is changed for a degree of stupor, which gradually advances to a partially comatose condition; the patient does not, as in the delirium of fever, arouse on slight efforts, but requires every effort on our part to arouse him; nausea supervenes, or, if before present, becomes more troublesome, and is especially brought on by raising the child, so that but little is retained on the stomach; and at the same time, if

* Dict. de Méd. tom. xxii.: art. Ombilie.

child is old enough, he complains of headache, or, if younger, there is screaming, and this screaming is of a peculiar sharp character; he frequently raises his hands to the head, which is preternaturally hot, and often drawn backwards; and we have our attention drawn to the symptoms, which now indicate that the disease is about to be complicated with, or is passing into, hydrocephalus. Of all the symptoms, those most indicative of such transition are, "the raising the hands to the head," "vomiting," and "drawing of the head backwards," "spasmodic twitchings of muscles, and contraction of the thumbs and great toes:" these symptoms often occur before there is any tendency to coma, and indicate, perhaps, the commencement of irritation of the membranes of the brain.

Dr. Joy alludes to a symptom omitted in most descriptions of remittent fever—namely, "stiffness in the neck, and intolerance of pressure in the upper part of the spine, with a general increased sensibility of the surface of the whole body," and remarks that the first did not escape Heberden's observation, who said,—“in fevers of children the face is often drawn to one side.” Dr. Joy had often seen it, but never knew it continue after the fever was cured. The increased sensibility of the surface is also alluded to by Dr. Willshire. I have repeatedly observed it in cases of cerebral irritation, and am inclined to believe that Dr. Joy's cases in which it occurred were complications of remittent fever with cerebral irritation, and that the increased cutaneous sensibility and drawing of the head to one side were diagnostic of it.

Dr. Hennis Green considers "headache is the most important symptom in tubercle in the brain;" while Rilliet and Barthez attach more importance to convulsion and headache, as a symptom of cerebral tubercle, and regard it as a more frequent symptom. Dr. West lays great stress on the persistence of vomiting: "In any case which you had thought to be one of merely gastric disorder, the persistence of vomiting must be looked upon with suspicion, and this even although the bowels act, and there be no obvious indication of mischief in the head." So, also, Dr. Duke, who says,—“he has more than once observed *vomiting* two or three times a day,

with languor and altered manner, to be the *very earliest* indication of the approach of cerebral disease.”

I have thus particularly dwelt upon the symptoms indicating the approach of hydrocephalus, as it is confessedly of great importance. Dr. Cheyne alludes to the fact of remittent fever terminating in hydrocephalus, and adduces cases in point, and, referring to the insidiousness of its approach in these cases, says,—“The child almost *imperceptibly slips* into hydrocephalus, and there are scarcely any acute symptoms.” “We are led,” says he, “to suspect some deeply seated evil of the brain from the frantic *screams*, and complaints of the *head and belly* alternating with stupor, or rather lowness, and unwillingness to be roused, and we are struck with the great irritability of stomach which exists in a degree beyond the fevers of this country, retching and vomiting being brought on by every attempt to sit up in bed.”

Dr. Copland also remarks, “when it (hydrocephalus) appears during remittent fever, . . . it often steals on so imperceptibly as not to be recognised until dilated pupils, strabismus, convulsion, or paralysis, and other symptoms of the advanced stage, are remarked.”

Dr. Locock also particularly refers to this “tubercular meningitis” and disease of the brain in scrofulous children, and functional disturbance running into organic being likely to arise from disturbance of the digestive organs: and, again, Dr. G. Bird alludes to the occurrence of obscure brain affection being developed in the course of gastric remittent fever. Many more extracts might be adduced to shew the frequency of the development of the one in the course of the other disease.

The following cases are abbreviated from Cheyne, with a view of showing those symptoms indicative of hydrocephalus:—

CASE XXIII. *Bowel Irritation followed by Hydrocephalus.*

Female, æt. 18 months (page 192 Cheyne's Essay). Had fallen away; sickly yellow complexion; relaxed bowels; belly full.

5th day.—Sawing of right hand; comatose; lost her sight.

CASE XXIV. *Remittent Fever followed by Hydrocephalus.*

Male, æt. 2½ years. (page 193). Convulsion at onset; in it passed loose clayey stool, with dark slimy streaks, and exceedingly *foetid*. Convulsion returned; pupils dilated; face pale (ulcerous stomatitis and fever previously). Next day skin hot; tongue loaded; *never had sickness or headache*; frequent fits; pulse hurried and vibrating.

3rd day.—Pupils greatly contracted; subsultus; large *green and slimy* stools.

4th day.—Amaurotic; three green shiny stools (Hydrocephalic?).

5th day.—Death.

CASE XXV. *Remittent Fever followed by Hydrocephalus.*

Female, æt. 4 (page 196). The mother of this child and two other children had remittent fever previously, and one child had symptoms of head affection afterwards. Remittent fever followed by *vomiting and purging*; *coma* supervening; pulse 200; constant restlessness; tossing about in bed, and grinding her teeth; blind; breathing irregular; breath sickly; constipation. Death 4th day. Arterial congestion of the surface of the brain; serous effusion under the arachnoid, and one ounce in the ventricles, which were not enlarged; abdomen not opened.

CASE XXVI. *Remittent Fever followed by Hydrocephalus.*

Female, æt. 7. Three children in the same lane were affected. Continued fever, with remissions in the morning, followed by head symptoms; pupils dilated; iris paralytic; amaurosis; sighing and every symptom of hydrocephalus "*except stools*," which were foetid and dark red brown: convulsions and death third day.

Dr. Cheyne (page 201) adduces these four cases as remittent fever terminating in hydrocephalus.

CASE XXVII. *Gastric Fever followed by Hydrocephalus.* (CASE V. of Dr. Bird. See Guy's Hospital Reports. Male, æt. 4.)

5th Jan.—Ill five weeks; pain in abdomen, with purging of dark and offensive matters: for one week there was febrile exacerbation each afternoon,

followed by marked and increasing stupor.

On admission, respiration hurried and jerking; chest apparently free from disease; *head large: forehead projecting*; slight squint of eye (congenital) face pallid and puffy; tongue, white fur; red tip and edges; abdomen flaccid, not tender.

6th.—Motions dark, offensive, scybulous; urine having an abundance of urate of ammonia; expression of face is that of quiet stupor.

8th.—Drowsy appearance unchanged; *headache*; *slowly* answers; no fever; no intolerance of light.

9th.—Tossing about in bed; pulse 140, small: blisters behind the ears.

10th.—Sudden collapse, followed by screaming and slight convulsion; pulse imperceptible; legs drawn up; abdomen flat; gnashes the teeth; pupils largely dilated; very sluggish.

Hyd. Chloridi, gr. ii. 2dis horis.

15th.—Died comatose.

Post-mortem appearances of brain.—Brain dry at surface; convolutions flattened; ventricles full of serum; fornix softened; serous infiltration at base, where arachnoid was opaque and thickened; a few tubercular deposits on arachnoid; mesenteric glands enlarged; all other viscera healthy.

Treatment.—Head shaved; cold lotion and leeches to mastoid process.

Emp. Lyttæ pone aures; calomel; and fever mixture.

CASE XXVIII. *Hydrocephalus supervening upon Chronic Remittent Fever.*

R., female, æt. 7 years, pale, anæmic, deficient in growth, and very delicate, with an hereditary tendency to tubercular disease: had formerly lived in the country, but latterly in London: had been ailing for some time, at one time better, at another worse; her ailment being stated as fever of an intermittent character, when, having been somewhat better for a day or two, and not sufficiently ill to keep her bed, in the afternoon, without any premonitory symptom, she was attacked with convulsion which lasted for some hours: this passed off, but returned again toward night, and she died comatose the following morning. No inspection allowed.

This case was communicated to me by a friend, and I understand there was

no suspicion or symptom of cerebral disease just before the convulsion, but she had been the subject of strabismus since two years of age.

D. Hydrencephaloid disease supervening upon Chronic Remittent Fever.

Besides the occurrence of true hydrocephalus in the course of remittent fever, symptoms stimulating hydrocephalus may arise from sympathy with the gastro-intestinal irritation, and not depending upon tubercle or irritation of the brain. Dr. Pemberton has referred to this:—"In very young children bowel irritation is so great as to produce convulsions, and during the fit it is totally impossible to determine whether the source of convulsion be the head or intestines." So, also, Dr. Locock:—"In chronic remittent fever the child is often reduced by bold treatment, and symptoms resembling the hydrencephaloid affection of Gooch and Marshall Hall are not unlikely to occur." It is in the more protracted cases of remittent fever, accompanied by much gastro-intestinal irritation, that these symptoms more frequently occur; they will be observed arising under different circumstances to hydrocephalus, and al-

though great irritability, aversion to light, and noise, and even convulsion may be present, together with increased heat of the head, yet we usually find the countenance of the child pale and blanched, its surface cool, the fontanelle depressed, and if it is placed in the erect posture indications of syncope appear; it is, also, usually, accompanied by a relaxed state of the bowels, in contradistinction to the confined condition of bowels, and the peculiar motions of hydrocephalus. It is of the greatest importance to diagnose this state of pseudo-hydrocephalus, as upon our right judgment the treatment and the recovery of the child will mainly depend.

Statistics.

But slight information can be gained from the statistics which we possess of remittent fever, or fever in general in children. I have, however, made such selections from the annual reports of the Registrar-General as bear upon the subject.

We find, in a summary of the London returns of mortality for the eleven years 1838 to 1848, that the deaths from "Infantile Fever," "Remittent Fever," and "Typhus Fever," were as follows:—

TABLE I.

| | 1838. | 1839. | 1840. | 1841. | 1842. | 1843. | 1844. | 1845. | 1846. | 1847. | 1848. |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Infantile fever . . . | 11 | 18 | 22 | 23 | 17 | 25 | 26 | 32 | 55 | 48 | 45 |
| Remittent fever . . . | 24 | 29 | 29 | 16 | 17 | 23 | 33 | 32 | 71 | 96 | 96 |
| Typhus fever . . . | 4078 | 1819 | 1262 | 1151 | 1174 | 2083 | 1696 | 1301 | 1796 | 3184 | 3569 |

But, of the latter two diseases, we require to know how many have occurred under the 10th year of age, or, in other words, in children.

Of this the Annual Reports do not furnish any very substantial information; but the following I have gathered from them:—

In the 1st Annual Report remittent fever is not mentioned, either in reference to adults or children.

In the 2d Annual Report it is mentioned—not, however, alluding to ages.

In the 3d Annual Report (mortality for 1839) it alludes to only *one* (male)

death by remittent fever, which occurred in Manchester, between the ages of 5 and 10 years; also 1 male, from ague, under 1 year: but we have more information respecting typhus among children, for Table F shows that—In Manchester, the mortality from typhus was 51 under the 5th year; in Liverpool, 46; in Birmingham, 47; and of these respective numbers, Manchester 26, Liverpool 27, Birmingham 29, were under the 3d year.

This shows that there is a fever registered as "typhus" among children which has a high rate of mortality.

In the 4th Annual Report (mortality for 1840) we find the following remark:—"Infantile remittent fever is, according to some pathologists, a sub-inflammation of the intestinal tube." And (page 360), in the Summary of the Weekly Tables of Mortality in the Metropolis for 1841, we learn that "Ague and remittent fever are included under the head of typhus." And again, in the 6th Annual Report, we are told that "remittent fever" only alludes to those cases similar to the remittent fever in tropical climates, and so rare in England."

I think it doubtful if the cases registered in the subsequent reports as remittent fever under 10 years of age, or even above that age, are in accordance with the before-mentioned opinion of the Registrar-General; but that, under the heads of "Ague," "Remittent Fever," "Gastro-enteritis" (which is a very fatal disease among children, and often the cause of death in remittent fever), "Worms," and "Mesenteric Disease," are included many cases commencing as and analogous to infantile remittent fever, but which have become complicated, and terminate in the secondary disease.

In the 5th Annual Report (mortality for metropolis 1842), table, page 272, 15 deaths are recorded under 10 years of age from remittent fever; consequently they may be termed infantile remittent fever. Of these, 8 were males, 7 females; and 6 were under 3 years: 5 were from 3 to 5 years (this

the most frequent), 4 were from 5 to 10. There are also recorded 348 deaths from typhus under the 10th year. Of these, 173 were males, 175 females, and 26 were under 1 year; 75 were from 1 to 3 years; 106, from 3 to 5 years (this the most frequent); and 141, from 5 to 10 years; the deaths in the two sexes being about equal; but the 3d to 5th year, as in remittent fever, being the highest in the rate of mortality.

At page 377 in the 5th Annual Report is a note:—"2 males, aged 3 months and 7 months; and 3 females—2 aged severally 1 year, and 1 aged 4 years—are included under the head of "Digestive Organs," but died of "infantile fever."

In the 6th Annual Report (page 510), referring to the mortality for 1842, a note says:—"Infantile remittent fever, 6 males and 6 females—6 under 1 year, one 1 year, 4 respectively 2 years, and one 4 years, included under the head of 'Worms.'"

In the 7th Annual Report (mortality for metropolis 1843—table, p. 46, and following), 9 male deaths are recorded from remittent fever at all ages; and of these, 5 are under 5 years of age; 8, under 10. Females: 13 at all ages; 6 under 5 years; 8 under 10; which makes, male and female, 32 deaths at all ages; 11, under 5 years; 16, under 10 years.

There are also recorded 479 deaths from typhus fever under 10th year. Of these, 232 were males, and 247 females.

TABLE II.

| | Under 1 year. | 1 to 3 years. | 3 to 5. | 5 to 10. | |
|-------------------|---------------|---------------|---------|----------|-------|
| Males | 25 | 56 | 55 | 96 | = 232 |
| Females | 23 | 50 | 76 | 98 | = 247 |
| | 48 | 106 | 131 | 194 | = 479 |

Thus giving rather a preponderance to the female sex.

In this report we are again told that remittent fever only alludes to the fever as it occurs in the tropics; but, from a notice of the ages, I doubt not that

cases of genuine infantile remittent fever have been reported and placed under this head.

The following tables have been drawn up from the 5th and 7th Annual Reports of the Registrar-General, with

a view of showing the mortality from various diseases of children which may be mistaken for infantile remittent fever.

In the 5th Annual Report (page 288) table of the mortality for 1840 in 24 town districts in the following diseases of children:—

TABLE III.

| | | Under 5. | | 5 to 10. | | |
|--------------------|--|----------|------|----------|------|---|
| | | M. | Fem. | M. | Fem. | |
| Feb. Remittens . | { Under 1 yr., 2 1 to 3 yrs. 9 3 „ 5 „ 7 } | 6 | 12 | 4 | 1 | { None over 10 : hence they must be infantile remittent fever. |
| Hydrocephalus . | { Under 1 year, 394. 1 to 3 yrs. 539 3 „ 5 „ 206 } | 617 | 522 | 110 | 91 | Then much diminishing. |
| Ague | | 5 | 3 | 2 | 3 | Only six above 10. |
| Gastro-enteritis . | | 565 | 428 | 53 | 32 | { Far most prevalent under 3d year. |
| Tabes mesenterica | | 19 | 13 | 3 | 1 | { Only 7 registered above 10. |
| Worms | | 28 | 37 | 7 | 6 | Only 2 above 10. |
| Dentition | | 682 | 600 | | | |
| Consumption . . | | 935 | 918 | 181 | 176 | |
| Typhus | { Under 1 yr. 85 1 to 3 yrs. 283 3 „ 5 „ 212 } | 281 | 299 | 154 | 177 | |

In the 7th Annual Report (mortality for the metropolis 1843) :—

TABLE IV.

| | | Under 5. | | 5 to 10. | | |
|--------------------|--|----------|------|----------|------|--------------------------------------|
| | | M. | Fem. | M. | Fem. | |
| Feb. Remittens . | { Under 1 yr. 2 1 to 3 yrs. 5 3 „ 5 „ 4 } | 5 | 6 | 3 | 2 | { 1 male above 1 5 females „ , |
| Hydrocephalus . | { Und. 1 yr. 580 1 to 3 yrs. 743 3 „ 5 „ 257 } | 956 | 624 | 115 | 62 | But few above 10 |
| Ague | | 4 | 5 | 2 | 1 | { 5 males above 10 5 females „ „ |
| Gastro-enteritis . | | 236 | 37 | 192 | 20 | |
| Tabes mesenterica | | 224 | 160 | 17 | 21 | { 5 males above 10 21 females „ „ |
| Worms | | 12 | 9 | 3 | 1 | None above 10. |
| Dentition | | 507 | 448 | | | |
| Consumption . . | | 446 | 517 | 100 | 118 | |
| Typhus | { Under 1 yr. 48 1 to 3 yrs. 106 3 „ 5 „ 131 } | 136 | 149 | 96 | 98 | |

In the 7th Annual Report (mortality for the metropolis 1844—see pages 54 and following) :—

TABLE V.

| | | Under 5. | | 5 to 10. | | |
|-----------------------------|---|----------|------|----------|------|---|
| | | M. | Fem. | M. | Fem. | |
| Feb. remittens . | { Under 1 yr., 2 1 to 3 yrs. 14 3 „ 5 „ 9 } | 12 | 13 | 3 | Nil. | { 2 males above 10 ; 3 females „ „ } |
| Hydrocephalus . | { Under 1 yr. 536 1 to 3 yrs. 754 3 „ 5 „ 235 } | 865 | 660 | 84 | 89 | { 33 males above 10 ; 32 females „ „ } |
| Ague | | 5 | 2 | 2 | Nil. | { 9 males above 10 ; 10 females „ „ } |
| Gastritis | { | 7 | 9 | 4 | 1 | |
| Enteritis | | 191 | 162 | 22 | 25 | |
| Tabes mesenterica | | 229 | 178 | 17 | 16 | { 15 males above 10 ; 7 females „ „ } |
| Worms | | 13 | 19 | 3 | Nil. | { 1 male above 10 ; no female „ „ } |
| Dentition | | 392 | 332 | 2 | Nil. | |
| Consumption | | 394 | 384 | 79 | 115 | |
| Typhus | { Under 1 yr. 43 1 to 3 yrs. 123 3 „ 5 „ 115 } | 143 | 138 | 106 | 120 | |

The preceding extracts and tables show the inaccuracy of the classification of the disease, and of the registration of the cause of death; they, however, tend to confirm opinions which are generally admitted,—namely, that infantile diseases, and among them infantile remittent, or fevers of any type, in children are more fatal in the metropolis than in the country, but that the mortality is greater in large manufacturing towns than in London, and in low marshy, than in high and well-tilled country districts.

It also appears that among the registered deaths, more females die of remittent fever than males; the same also applies to typhus in children (the difference, however, is so slight, that no deduction can be drawn from it); that more female children die of consumption

than males, whilst more males die of hydrocephalus than females; that the greatest amount of mortality from hydrocephalus is under the third year, whilst the greatest mortality from remittent fever (under 10 years of age) and infantile typhus is from 3 to 5. This circumstance is of some service in our diagnosis and prognosis, for we may, *cæteris paribus*, consider hydrocephalus the disease of early, whilst remittent fever is rather that of advanced childhood; so likewise, on the supervention of cerebral symptoms in any given case of remittent fever, we should more fear the development of hydrocephalus in the male than in the female, and, on the contrary, we should fear phthisis more in the female than in the male child.

[To be continued.]

OBITUARY.

C. H. JAMES, ESQ.

On the 11th inst., at Glasgow, Charles Hugh James, Esq., surgeon, late of the 39th Regiment.

PROF. CH. FR. NASSE.

PROFESSOR CH. FR. NASSE, of the University of Bonn, known in England by his

researches in pathology and clinical medicine, died on the 18th of April, in the 73d year of his age.

EDWARD PAPE, ESQ.

On the 17th inst., at his residence, 1, Princes Street, Stamford Street, Edward Pape, Esq., Surgeon, aged 57. He was highly respected and deeply lamented by a large circle of friends.

ON
PUTREFACTIVE DISEASE OF THE
LUNGS, AS A SEQUEL OF PUL-
MONARY APOPLEXY.

BY H. FEARNSIDE, M.B., LOND.
Physician to the Preston Dispensary.

GANGRENE of the lung, considered by the older writers upon medicine to be a common affection, has been proved by the more accurate pathological researches of modern times to be one of the rarest deviations from the natural state of that organ, as it is also one of the most terrible.

The striking character of the phenomena by which it is accompanied, no less than the severity of the disease in itself, render it a subject of peculiar interest. Having, on a former occasion, in the pages of this journal,* entered upon the general history of pulmonary gangrene, it is not my intention at present to resume the consideration of that part of the question, but simply to direct attention to one form of the affection, and to one class of circumstances under which it may occur.

Whilst a certain degree of obscurity invests the whole pathology of the disease, it appears to have concentrated itself around its etiology.

The rarity with which it results from acute inflammation of the lung has been abundantly proved by M. Grisolle.† Of 305 cases of pneumonia analysed by him in his elaborate treatise upon that disease, not one terminated in gangrene. Of 70 cases of gangrene, collected from various works and periodicals, but five could be regarded as produced by inflammation.

In the majority of the cases in which pulmonary gangrene has been seen as an idiopathic affection, it has occurred in individuals whose vital energy has been lowered from the action of some agency or other,—as prolonged exposure to cold,—or whose blood has become contaminated, as by the presence of the poison of erysipelas, or of some other analogous to it, whilst causes have also been in operation calculated to induce great congestion of the internal viscera.

The form of disease of which the subjoined case appears to be an example is that which has been described by Dr. Law,—the putrefaction of blood effused into the lung in pulmonary apoplexy. The most conclusive evidence in such questions, that afforded by examination after death, is wanting; but a careful consideration of the signs and symptoms presented by the patient, and the order in which they manifested themselves, leads me to refer the case to the class in question.

Cough and emaciation of twelve months duration; signs of condensation of the upper part of both lungs; temporary improvement; return of the cough and dyspnœa after over-exertion and exposure to cold; profuse and frequently recurring hæmoptysis; extension of the solidification of the right lung; development of intensely gangrenous odour of the breath and expectoration; great constitutional debility; slow and gradual improvement under the use of chlorine, opium, and a supporting diet.

J. B., aged 44 years, a tall, pale, unhealthy-looking man, was first seen by me in the early part of the winter of 1850. He had been employed for the greater part of his life in a cotton factory, in one capacity or another, but for the preceding four years he had not followed any regular occupation, and appeared to have been intemperate and dissipated. One of his sisters died of consumption, but his parents lived to a good old age.

Notwithstanding his irregularities, his health had been generally good until within the preceding twelve months, during which period he had suffered from cough, and gradually lost both flesh and strength. On examining his chest at that time, there were signs of the existence of some consolidation of the summits of the upper lobes of both lungs, as was evidenced by a certain degree of dulness upon percussion, and feeble respiratory sound, which, on the left side, had in expiration a bronchial character.

His case was supposed to be one of incipient tubercular disease of the lungs: a counter-irritant liniment was directed to be applied externally to the chest, and cod-liver oil to be taken internally, and he was lost sight of for some weeks.

When he was next seen, he gave the following report of himself during the

* MEDICAL GAZETTE, vol. XXXV. p. 177.

† Traité de la Pneumonie, p. 345.

interval:—Feeling better after the use for some time of the means before mentioned, and being in poor circumstances, he obtained employment at a public-house as a brewer, but soon found himself unequal to the labour. On one occasion, in attempting to move a large cask, he fainted, fell to the ground, and remained for some time in a state of insensibility upon a cold damp floor. Immediately afterwards his cough became much worse, and he began to expectorate blood, at first scantily, but subsequently in large quantity, and four times amounting to upwards of a pint at once. Shortly after this period he again came under my notice. At that time his complexion was very pale, his face shrunk, and his countenance anxious: there was considerable general emaciation. His skin was warm, and he perspired much at night; his pulse was 112, small, and jerking: the respirations 34 per minute; his tongue was covered with a yellowish fur. He complained of sometimes feeling sick, but he never vomited; he had no appetite, and his bowels were confined. On examining his chest, it was remarked that the right side expanded more than the left one, especially superiorly, and that the vocal fremitus was about equally distinct on each side. There was some dulness on percussion under the right clavicle; but this was much more marked under the left one, where the sound was less resonant than natural as low as the fourth rib, and especially so over the second and third ribs. Under the right clavicle the respiration was feeble, under the left one inaudible, and over the upper part of the left side of the chest a coarse crepitant rhonchus was heard: over the same situation there was increased resonance of voice. Inferiorly, both in front and behind, the stroke-sound was clear, and the respiratory murmur did not deviate from the natural condition, except in being more feeble than usual; but over the left scapular and supra-scapular regions the sound on percussion was dull, and a submucous rhonchus was heard. The expectoration was profuse, muco-purulent, and mixed with blood.

Treatment, and progress of the case.—Complete rest and quietude were enjoined, with a light unstimulating diet, and the use of small doses of a saline aperient, in combination with a few minims of diluted sulphuric acid. After

the lapse of some days the expectoration, which was very abundant, amounting to 16 or 20 ounces in 24 hours, ceased to contain blood in any obvious quantity; but the cough continued exceedingly violent, and the dyspnoea considerable, whilst the signs of engorgement of the upper half of the left lung remained unaltered. His feebleness preventing the use of topical blood-letting, a blister was applied below the left clavicle, and a mixture prescribed containing antimonial wine and compound tincture of camphor. At this time his breath and expectoration were first noticed to have an offensive odour, which gradually, in the course of four or five days, deepened into the unmistakable and intolerable fœtor of pulmonary gangrene. The fluid ejected from the lungs at this time was rather thin and diffuent, contained but little air, was chiefly of a greenish-yellow colour, mixed, however, with a fluid of a dark brownish hue, which, when examined under the microscope, was found to owe its colour to the presence of blood-globules. Concurrently with this change in the pulmonary exhalations there was an increase in the constitutional distress and disturbance; his pulse became more frequent, his nights restless, his appetite failed almost entirely, and he was continually bathed in perspiration. Without much expectation of any improvement taking place, he was directed to take the nitro-muriatic acid, in combination with opium, in a bitter infusion; to have chlorine diffused through the air of the apartment which he occupied; and to take as much nourishing food as his digestive organs would bear. For nearly a fortnight he appeared to undergo but little alteration in any respect; but after this time his appetite improved, the liquid sounds heard over the upper part of the left lung gradually diminished, but the respiration remained exceedingly feeble, and the signs of consolidation persisted. Although repeatedly and most carefully examined, I could never detect anything like cavernous breathing: but, over the whole of the left side of the chest in some degree, and over the upper part especially, respiration was remarkably noiseless.

The only changes which the expectoration underwent were, that it became thicker and more uniformly of a greenish

yellow colour, losing the admixture of the brown fluid. Although not constantly present in the same degree, it continued to exhale the gangrenous odour for some weeks. The improvement which had taken place in his condition was maintained under the use of cod-liver oil. He remained, however, for some months in a languid and feeble state of health; nor was it until the return of warm weather that he acquired any considerable increase of strength; the cough and dyspnœa, less frequent and severe, still continued, and he was at that time pale and thin.

The next opportunity which I had of seeing or examining this patient was in the spring of the present year. He then presented the same pale, unhealthy aspect, as when formerly seen; but he considered that his health had been gradually improving during the preceding nine months, and he had comparatively little cough. There was a marked depression of the subclavian and mammary regions on both sides of the chest, and on the left side in particular. The expansion of the chest was not equable nor equal on both sides, the right expanding more freely than the left. There was a degree of dulness on percussion under the acromial ends of both clavicles; and on the left side the stroke-sound was imperfect as low as the third rib. The respiratory murmur was feeble on both sides, and jerking under the left clavicle: inferiorly, the sound on percussion was abnormally clear, and the respiratory murmur feeble. The vocal resonance was considerable over the upper part of both lungs. Percussion elicited a dull sound over the left supra-spinous fossa, and in the same situation the respiratory sound was faint and distant, ending at the close of a deep inspiration in fine, dry, crackling. There was no deviation from the natural state either in the sounds or motions of the heart.

REMARKS.—As is stated in the history of the case, when the patient was first seen he was supposed to be suffering from incipient phthisis. This conclusion was rendered inevitable by a consideration both of the prodromata and the existing signs and symptoms. His course of life had been one calculated to lower the vital standard, and to produce degraded nutrition. Excesses of various kinds, and impoverished diet, had con-

tributed to this result. His disease was evidently a chronic one; the physical signs gave evidence of the existence of some consolidation in the apices of both lungs, and this, interpreted by the light afforded by his history, could only be tubercular.

The nature of the disease which existed when he next presented himself to notice seemed to be almost equally clear. Very soon after the operation of a cause than which nothing can be conceived more likely to induce great pulmonary congestion, he was seized with profuse hæmoptysis, which recurred from time to time. On examining into the state of the lungs it was found that there was a much greater amount of solidity in the upper part of the left lung than when he was previously seen, as well as considerable effusion into the smaller air-tubes. The only causes to which this could be ascribed were—(a), extension of the tubercular disease; (b), condensation of the structure of the lung as a result of inflammation; (c), or pulmonary apoplexy.

(a). The great increase in the amount of solidification since the time when the patient was last seen, and the fact that up to a late period his health had been improving, coincided with the evidence supplied by the history as to the existence of *recent* disease, and precluded the idea of its being owing to increased tubercular deposit in the lung.

(b). Although pneumonia is by no means so uncommon in the upper lobes of the lungs as many practitioners appear to suppose—a fact which divests the circumstance of *position* of much of its importance as an element in the diagnosis of cases such as the one under review—there were more conclusive reasons for denying the existence of inflammation of the lung. Such were afforded by the general history, the occurrence of the hæmoptysis, the character of the pulse (small, feeble, and jerking), and the character of the expectoration.

(c). That the condensation was due to the effusion of blood into the substance of the lung; in other words, pulmonary apoplexy, was rendered probable by the presence of hæmoptysis returning in fits—one of the most constant and least equivocal signs of this affection, when associated with other phenomena, also witnessed in this case. These were the dulness on percussion,

absence of respiration over the summit of the lung, and the coarse crepitation over the neighbouring parts.

This being granted, the chief interest of the case attaches to the subsequent occurrence of putrefaction of the lung—a fact of which the intolerable odour of the breath and expectoration, occurring under the circumstances above described, will be deemed, I apprehend, sufficient evidence; for, although fetid matter may be expectorated in other diseases than pulmonary gangrene, it will be admitted, I think, that its exhalation from a solidified lung, without the presence of any of the signs of a cavity, can be ascribed only to the disease in question.

The termination of pulmonary apoplexy in gangrene is undoubtedly rare: it has, however, been previously witnessed. Dr. Townsend remarks upon this subject:—“Pulmonary apoplexy has been observed to occur as a precursory symptom of gangrene, and may, we conceive, in some cases contribute to produce it. In one instance, particularly, we were enabled to follow the different stages of the disease from the formation of an extensive hæmoptoic engorgement to its conversion into a large gangrenous abscess. The rationale of this transition may, we conceive, be explained thus: in the hæmoptoic engorgement the circulation through the indurated mass is completely obstructed by the solidification of the part, and by the vessels leading to it being plugged up with coagula of fibrine. This plugging up of the vessels has been noticed by Laennec, and more particularly by Bouillaud, and we have repeatedly ascertained the fact on dissection. Now if we compare the condition of the part thus circumstanced with the pathology of gangrene, as laid down by the most recent and approved authorities on the subject, we shall find it placed under precisely the most favourable circumstances for passing into gangrene—or, as the disease has been more appropriately designated by Dr. Law, putrefactive disorganisation of the lung.”

Another writer,† to whom we are largely indebted for our increased acquaintance with thoracic pathology,

makes the following observations upon this question:—“The putrefaction of blood previously effused into the substance of the lung, as in cases of pulmonary apoplexy, has been considered by Dr. Law as constituting an important variety of pulmonary gangrene. I have not seen any cases of the change from one of these diseases into the other; and I apprehend that the occurrence must be rare. I would say, further, that, where a clot of blood effused into the lung putrefies, this change is in itself a proof of a gangrenous disposition pre-existing; and I feel satisfied that the hæmorrhages in cases of gangrene have no relation to pulmonary apoplexy. That an effusion of blood into the lung does not more often end in putrefaction of the fluid is certainly an extraordinary fact; but not more so than the rarity of putrefaction in abscesses, tubercular cavities, or empyema and pneumo-thorax. That it is rare appears from the fact that neither Laennec, nor many other writers on pulmonary apoplexy, mention gangrene as a result of the disease; which, besides, is, in many instances, connected with disease of the heart, producing either an active or passive congestion of the lung.”

From the decisive character of the symptoms presented in this case, it might have been expected that the signs of the existence of a cavity would have been unequivocal, but such was not the fact: so long as the patient remained under my observation, I was unable to satisfy myself of the presence of an excavation. It is stated by Dr. Wood, of Philadelphia, in his work upon the Practice of Medicine, that after the expectoration of fetid matter we must conclude that a cavity has formed, and that we can detect it by the usual means. Dr. Stokes dissents from both these opinions.* He states that he has known the expectoration of putrid matter to occur within thirty-six or forty-eight hours after the operation of the exciting cause, and that it is difficult to conceive the formation of a cavity so rapidly; and that, on the other hand, months may elapse with the best-marked symptoms, and yet no signs of a cavity be discoverable.

A few words upon the progress of the patient may not be misplaced in con-

* Cyclopædia of Practical Medicine, vol. i. p. 141.

† Dr. Stokes, in Dublin Quarterly Journal of Medical Science, February 1850.

* Op. cit.

clusion. It is difficult to conceive an apparently more unpromising case; and it must be confessed that, after the manifestation of the putrefactive symptoms, its treatment was prosecuted for some time without any hopes of recovery. His impaired health, and the previously existing intractable disease of which there was every reason to believe him the subject, the recent attack, and the prostration occasioned by excessive loss of blood, conspired to render the prognosis exceedingly grave. Contrary, however, to the anticipations which had been formed, after a short period he slowly, but gradually improved, and, after the lapse of some months, regained a tolerable amount of health. The result strongly encourages us to persevere in our efforts to relieve, even when the aspect of a case is most unfavourable. The treatment adopted was analogous to that first recommended by Dr. Stokes, the beneficial effects of which have been several times confirmed by experience.

CASES IN CLINICAL MEDICINE.

By ROBERT MACGREGOR, M.D.

Junior Physician to the Royal Infirmary of Glasgow.

MRS. GILLANDERS, æt. 27, Scotch, married, admitted 11th December, 1851, 1 P.M.

Patient states that twelve days ago, after eating some apples, which she had been in the practice of doing frequently, she began to experience slight pain in the abdomen, the exact position of which she is now unable to remember. On the same day she was seized with vomiting of greenish yellow matters, with intense thirst, and loss of appetite.

The abdominal pain gradually increased in severity, the vomiting became more frequent, and the bowels continued to be obstinately constipated notwithstanding the administration of purgatives. She obtained the advice of a medical man, who prescribed creasote, friction over the epigastrium with tartar emetic ointment, calomel and opium, &c. The vomiting continued for eight days, and then stopped. On admission the patient complains much of the pain in her abdomen, and is moaning loudly; her skin is covered with clammy per-

spiration, her countenance is expressive of great anxiety, and her eyes are deeply sunk, and surrounded by a very dark areola. She was advancing towards the seventh month of pregnancy. The abdomen appears much more distended than is natural to that period of uterogestation, but no minute examination can be made, as she complains of intense agony upon the slightest touch. On the application of the stethoscope the foetal pulsation is heard in the left iliac region: the sounds, though weak, are softish, and not so rapid as usual. The placental soufflet cannot be found. She has some dyspnœa, but no cough or abnormal chest sounds.

Yesterday 20 leeches had been applied to the belly without any relief to the symptoms. Had a slight passage in the bowels either this morning or last night. Tongue is covered with brownish fur towards the base, but is red at the point. Gums are not affected by the mercury. Pulse 152, is small and weak.

Applicetur vesicatorium amplum. abdom. et habeat pilulam cum Calomel. gr. iij.; et Opii gr. j. secundâ quâque horâ.

8 P.M.—Vomited the pills when first taken, but is now retaining them. The body is covered with cold clammy sweats, feels very chilled, more especially in the upper extremities, but patient declares that she feels rather warm. She does not moan so much, and feels easier; the pulse is scarcely perceptible at the wrist, and she appears to be fast sinking.

Died at 9 P.M.

Inspectio cadaveris.—On opening the abdomen, the ascending colon was found much displaced from its natural position; the caput coli was lying in the centre of the belly at the lower part of the epigastric region, the vermiform process extending into the umbilical region. The course of the transverse colon was much altered; it passed nearly straight across the umbilical region to the opposite side, lying immediately over the body of the first lumbar vertebra, and at that point appeared to be constricted by the mesentery passing to the small intestines, which latter had risen higher up in the abdomen than the transverse colon, and were stretching over in front of it. The peritoneum was inflamed, and some

lymph was effused between the convolutions of the intestines.

The large intestines, from the constricted part to the cæcum, and the adjoining part of the ileum for a distance of upwards of three feet, were highly inflamed and of a dark colour, the inflammation pervading all the coats, but the mucous coat being of a deeper tint than the others.

From the caput cæcum to the constricted part the colon was enormously distended with flatus and fæces, measuring in circumference $14\frac{1}{2}$ inches. Beyond the ileo-cæcal valve the small gut was filled with gas and fæcal matter, but not much distended above the normal dimension. Below the constricted part there was no marked inflammation, and the bowel was almost empty. The uterus was found lying in an oblique position towards the right iliac fossa. There was also a pelvic abscess discovered, the exact position and extent of which were not ascertained, from the manner in which the rectum, uterus, bladder, and pubes were taken out to be sent to the University Professor of Midwifery. The abscess, however, had no connection with the peritoneal cavity. The uterus with its contents was injected by Dr. Allen Thomson, and presented an interesting physiological preparation. In consequence of the child being under the seventh month of intra-uterine life, it was not deemed expedient or necessary to perform the Cæsarean operation at the death of the mother.

Now arises the question whether Amussat's operation for forming an artificial anus in the right lumbar colon should or could have been had recourse to in this case as a last resource. "M. Amussat has lately established beyond any question that the danger and difficulty of opening the lumbar colon, as recommended by Callisen, whether in the old or young subject, had been exaggerated by all writers; and although he cannot be said to have originated the operation, we think that he has the credit of its modern introduction.

"The lumbar region, in which Callisen's operation is to be performed, is a quadrilateral space, bounded above by the last false rib, below by the crest of the ilium, behind by the longissimus dorsi and sacro-lumbalis mass of muscles, and anteriorly by a vertical line

falling on the centre of the crest of the ilium. The colon in this space lies above in front of the kidney, from which it is separated by fat; in the centre of the space it corresponds to the transversalis fascia, by which and a little fat it is alone separated from the quadratus lumborum muscle; below it corresponds to the crest of the ilium; anteriorly and externally it is in contact with the small intestines; its distance from the spine varies as it is contracted and distended. The important point, however, is the relation of the posterior aspect of the colon in this space to the peritoneum; is it constantly, or nearly so, denuded of peritoneum to a determinate extent, and that both in the adult and in the infant? M. Amussat maintains that in the adult a lumbar meso-colon never exists, that the intestine is denuded of peritoneum, at least on its posterior third, to which extent the cellular tissue, external to the peritoneum, constitutes its outer layer or sheath. This cellular space, which is formed by the separation of the layers of the peritoneum, commences at the angle of union of the transverse and lumbar colon, and has no very constant line of demarcation below, but usually terminates about the crest of the ilium. Its lateral extent is exactly defined by two of the three longitudinal muscular bands which characterise the great intestine; one running in front of the lumbar colon, the other two externally and internally, precisely along the lines whence the peritoneum is reflected on the parietes of the abdomen. But the condition of the parts varies according to the manner in which the examination is made, and with the condition of the intestine; and hence, according to M. Amussat, have arisen the misconceptions respecting the relations of the colon and the peritoneum, and the failures in attempting to open the intestine without wounding the serous membrane.

M. Amussat, instead of the vertical incision mentioned by Callisen, prefers a transverse incision four or five fingers breadth long, midway between the last false rib and the crest of the ilium; and he divides the deeper parts; or even, if the patient is fat, crucially, in order to gain room. The advantages of the transverse incision are, 1st, that it makes the operation easier and more certain, and avoids the danger of di-

viding the lumbar vessels and nerves; 2d, that it facilitates finding and opening the intestine without wounding the peritoneum; and 3d, it enables us to establish the artificial anus more anteriorly; with a view to favour which, the opening in the intestine should be drawn forward and secured to the anterior angle of the wound.

M. Amussat (*vide* British and Foreign Medical Review, Oct. 1844), when operating on the infant, recommends us not to expose the kidney too much, to avoid making a crucial incision, and points out the great difficulty of identifying the colon when contracted, and advises pressure and percussion. Amussat detected the colon from the greater development of its muscular fibres compared with those of the small intestines. M. Baudens says, that when impacted with fæces the colon may be confounded with the kidney; and, if it is supple or elastic, from being distended with gas, then we cannot discriminate it by the touch from the small intestines, and recommends exploratory acupuncturation "as an infallible sign;" but, as the reviewer states, M. Baudens forgets to inform us how we are to know whether the instrument has penetrated the large or the small intestine.

My predecessor, Dr. Easton, has given an excellent description of a similar but a more colossal case of enlargement of the colon from obstruction, in the Edinburgh Monthly Journal of Medical Science, Dec. 1850. It occurred during a first pregnancy; and, from this and the other appearances, he concluded it to be congenital.

Mrs. Gillanders had been safely delivered of a full-grown child in her first pregnancy; so that in this, her second, something must have happened to create the obstruction independent of the enlargement of the gravid uterus. In this case the operation on the left side could have been of no avail, as the obstruction occurred in the transverse colon; and in all probability it would have been of as little avail in the right side, because of the abnormal position of the ascending colon (so well described by Mr. Perry in the case-book). Hence comes the lesson, that in such cases the unusual distension from accumulation of flatus is apt to displace intestinal viscera, to which nature has given a considerable latitude of motion, and thus render an operation, hazardous under

the most favourable circumstances, unusually and unexpectedly so, perhaps, in cases requiring it.

NOTES ON THE POST-MORTEM EXAMINATION OF THE BODY OF AN IDIOT.

BY W. B. KESTEVEN,
Surgeon.

A boy, aged fifteen years, met his death by accidental burning. Of his history nothing is known by the writer.

The extremities were both turned inwards, but the body otherwise presented externally nothing remarkable. The body was examined twenty hours after death.

It was observed, however, on the neck, that the jugular veins converged towards the lower part of the neck, and communicated by a transverse branch which passed between them, crossing the trachea; a branch from each communicated with the internal jugular vein.

The arteria innominata ascended in front of the trachea, before it gave off the carotid and subclavian of the right side.

The thoracic and abdominal viscera presented nothing abnormal.

The frontal bone was much flattened; the posterior regions of the skull showed a much larger development. On opening the cranium the surfaces of the arachnoid membrane were found adherent to each other over the anterior lobes. Serous effusion was found in the pia mater beneath the arachnoid. The vessels on the surface were loaded. The substance of the brain was generally softer than usual.

On the upper surface of the left hemisphere the substance of the convolutions was replaced by a brown gelatinous semi-fluid substance; the place of the sulci was filled up by a yellow fibrinous deposit. The gelatinous substance, when examined under the microscope, was found to consist of shreds like areolar tissue, and a granular semi-fluid. This alteration extended downwards as far as the roof of the lateral ventricle. The ventricles were both of the same size, and contained a small portion of serum; the choroid plexuses showed

signs of frequent congestion. The outer walls of the ventricles were moderately firm. On the left side the thalamus opticus was only half its usual size. On the left side the hippocampus major, and the pes hippocampi, were less developed than on the right side, as were also the posterior pillars of the fornix and the corpus fimbriatum.

The peduncle of the pineal gland was larger on the left side; the gland itself contained fluid, but no phosphate of lime. The nates were larger than the testes; the shape of the latter was altered by increased length.

The cerebellum was normal in form and structure.

The nerves at the base of the brain presented nothing unusual.

The fossæ in the base of the skull were but faintly marked by the convolutions; this was more especially the case on the left side.

Upper Holloway, June 18, 1851.

ON

CRETINISM IN LONDON.

BY DR. G. A. REES.

THE leading article in the *MEDICAL GAZETTE* for June 13th, on Cretinism, together with the abstract of a letter from Dr. Guggenbühl, on the Presence of Cretinism in England, appearing in the same number, induce me to trouble you with the following remarks, some of which have been written for many months, but withheld from a consciousness of their imperfect character.

The fact that, in one European state, out of a population of two millions and a half, twenty-one thousand, or 1 in every 120, should be afflicted with cretinism, at once stamps the subject with a painful interest to every one sympathising with human suffering; but that interest must be much enhanced to the readers of the *GAZETTE*, when it is known that the most accurate observer of the disease, Dr. Guggenbühl, has detected its presence in different parts of Great Britain; and will, I think, be still further increased if its presence be recognised in this metropolis, which I feel persuaded, on more careful observation, will be the case.

That cretinism prevails, though happily to a small extent, among infants

and children living and born in London, I have no doubt; and cases would be observed more frequently, but that the subjects of the affection are so delicate during infancy that the majority perish, generally from pulmonary disease, during that period, many of which majority would probably survive in a milder and more humid atmosphere, such as obtains where severe forms of the affection are observable.

In a treatise I wrote some years since, on Diseases of Children, and which was published in 1841, the following passage occurs, when speaking of children in a fatuous state from atrophy of the brain:—"There are children sometimes brought under the notice of the medical practitioner in a state of fatuity, which differ materially from the foregoing, though the fatuity seems to be dependent upon imperfect organisation of the brain. The head, in these children, is of natural size,—it may be, rather larger, but their general appearance is very remarkable. The face is large and bloated, the nose flat, the lips excessively thick and much protruded, as also the tongue, which is of great magnitude. In the cases I have seen the bowels have been excessively torpid, not acting for days together, unless from the use of violent cathartics. Another peculiarity in these children is their tardy growth. I have seen them at five years of age no taller than other children of two years old; but, though they do not increase in height, they augment in bulk, being exceedingly firm and brawny. These children are not completely idiotic; they can make their wants understood, but cannot articulate, and walk very imperfectly, if at all." I believe this forms a tolerably correct description of a case of cretinism, though, until I read Dr. Wells' treatise on Cretinism, I was not aware of the fact.

Since the date at which the above was written, I have met with other cases, and at this time have two patients which I consider examples—the one of the mildest form, the other of a more marked state of cretinism: the former, when first seen by me in May 1850, was 9 years of age, and I have the following sketch of the case:—

"W. C., ætat. 9 years, born in London, a dwarf, and, to a slight degree, cretin. Height, 3 feet 1 in.; (average, judging from my own family, about

4 ft. to 4 ft. 6 in.) Countenance dull; head natural size; face pale and bloated; tongue large; lips thick; abdomen tumid; extremities short; fingers short and chubbed; swelling on either side of neck; bowels now regular, at times much confined; intellectual faculties obtuse; articulation slow and imperfect."

This lad, during the last year, has, by the use of cod-liver oil, friction, and exercise in the open air, remarkably improved; his countenance is more intellectual, his speech more rapid, and he has grown an inch.

The more decided case is a female infant, one of a family of four; the other children, as also the parents, being healthy, and surrounded with every comfort. I saw her first in May last, and the note of her case is as follows:—

"F. C., ætat. 1 year: cretinism; head of natural size, very round; countenance pale and bloated; lips thick; tongue large, and protruding beyond lips; chest tolerably well formed; abdomen tumid; spine weak, sits in a heap; extremities short, and of brawny hard feel, especially below elbows and knees, where they are unnaturally bulky, the upper arm and thighs feeling shrunk and flabby; hands large; fingers short and blunted; skin in general harsh and cold; bowels at intervals much confined; no signs of teeth; pulse 90.; takes very little notice."

Besides these cases, I have met with other examples of the same affection, and have not been able generally to assign any cause for their occurrence: they presented themselves in families of three or four children, the remainder of whom showed no corresponding symptoms. In one case these seemed to follow an accident in early infancy: this case I find noticed in the case-book thus:—

"— Proper, ætat. three years, residing in Britannia Street, City Road, died March 1849. The symptoms which preceded death ten days were convulsions and insensibility; but, before that, the symptoms of cretinism were well marked: the child's growth being arrested, the intellect obtuse, the mouth always open, and the tongue protruded; the abdomen tumid; the limbs firm, but short, and the fingers short and thick; the gait unwieldy, and the child unable to talk: when a few months old, had a severe

fall, and remained insensible for some time. The parents date from this accident the present state of things.

"On examination after death, a depression was found on the calvarium, and under the arachnoid covering of the corresponding portion of the cerebral hemisphere a small brown substance resembling a coagulum of blood in process of absorption. Trunk not allowed to be examined."

Another case, which is the last I have to mention, was attributed by its parents to a fright received by the mother when pregnant, from meeting an idiot; and I have retained the following imperfect sketch of the symptoms:—

E. E., ætat. nine months: ill from birth; very diminutive; sucks freely, but has no idea of feeding; takes no notice; face flat, there being no bridge to the nose; the eyes are wide apart and small; the eyelids shrunk and shrivelled, giving an expression of mature age, without emaciation; the mouth large, the tongue protruding between the lips; no signs of teeth; the bowels always confined, not acting more than once in a fortnight; urine scanty; the abdomen large; the extremities very short; skin cold. It was brought to me with severe dyspnoea and cough, under which it shortly succumbed. On examination after death, a considerable portion of the lungs was found in a state of atelectasis, and fluid observed in the pericardium; but the points bearing on our subject were the pale, soft state of the brain, together with the small size of the cerebellum, which weighed only 3xiss.; the thyroid body small, the isthmus being the larger portion; the lobes in a rudimentary state.

The symptoms of cretinism are not in this case well marked; but I think there are points of resemblance in the tardy development of any mental apprehension, in the diminutive size and stunted extremities, and in the swelled and protruding tongue, which would become further developed, and constitute cretinism, did the infant survive. At any rate, these infants must form a class by themselves, if not regarded as cretins. They are not uncommon cases, and not difficult to recognise, though, at first sight, they may be mistaken for examples of syphilitic cachexia, owing to their diminutiveness, the sallow complexion, and imperfect nose; but they want the waxy-looking skin, the madrosis, and

general baldness, and, above all, the snuffle, which characterise that complaint.

In conclusion, I beg to apologise for trespassing so far on your patience and that of your readers with these remarks, confessedly imperfect, but intended to direct the attention of others to the subject.

2, Artillery Place, Finsbury Square,
June 25, 1851.

ON THE
MICROSCOPIC CHARACTERS OF
THE SEEDS OF LOBELIA
INFLATA.

EXAMINATION IN CASES OF POISONING.

By FREDERICK CURTIS.

THE seeds of *Lobelia Inflata* may be found in the pods of the dried plant as imported, or in the powder, as most of the seeds escape injury by the mill or mortar. Many fatal cases of poisoning have taken place in this neighbourhood from the very frequent administration of powdered *Lobelia*, and of the seeds, in doses of a tea-spoonful or more, by the disciples of Dr. Coffin.

By sifting the powder through apertures of $\frac{1}{45}$ inch diameter, I remove the coarser portion, and $\frac{1}{75}$ inch apertures are required to remove the finer particles. By this means a large bulk of the drug is dispensed with, leaving all the uninjured seed on the $\frac{1}{75}$ inch sieve.

This powder may be examined under a microscope of about eight diameters' power. The seeds are readily distinguished: they measure about $\frac{1}{30}$ inch in length, and $\frac{1}{75}$ inch in breadth; they are puce-coloured, almond-shaped, and are beautifully and regularly marked with ridges and furrows, and similar cross-ridges generally passing at right angles with the former, so that the integument has a series of oblong-square open cells over its entire surface, and presents an appearance resembling basket-work.

The seeds may be picked out individually, if required, with the point of a needle, either by transfixing them or by wetting the needle.

To estimate the number of seeds in a given weight of the drug, I used the following method:—Weigh a drachm

of the dried plant, pick out carefully all the stalks, and perhaps a very few leaves, so as to leave exactly one scruple of the membranous parts, powder this gently in a mortar, then weigh out one grain and divide into three parts; each of which will represent one grain of the entire plant in reference to the number of seeds it would contain. This may be placed in separate portions under the microscope, and the seeds counted or picked out separately. The sieves save a good deal of labour. By proceeding in this way I have counted thirty seeds to the grain of the dried drug.

I could not succeed in separating the seed by mixing the powdered drug with water, and straining.

In searching for the seeds in the contents of the alimentary canal, additional difficulties would obviously present themselves, such as the presence of fatty substances, &c. After drying, the fatty matters might be removed by chemical means, or by bibulous paper, and the residue carefully reduced to powder.

I have examined minute seeds from many plants, but have found none that are not included in the order which could be mistaken for *L. inflata*. Among these are the following varieties of tobacco:—Broad-leaved Virginian, New Scarlet, Pink and Brazilian, Foxglove and the Hare-bell, which last resembles *L. inflata* in shape; but its larger size, and its difference in colour and structure are very evident.

I have also made particular examination of the seed of as many varieties of *Lobelia* as I could procure, namely,—*L. heterophylla*, *L. gracilis*, *L. gracilis alba*, *L. ramosa*, *L. syphilitica*, *L. erinus alba*, *L. propinqua*, *L. bicolor*, *L. triquetra*, and *L. cardinalis*; none of which resemble *L. inflata* except the last, which is larger, has a far rougher and coarser appearance, the cells being less distinct; it has also a lighter colour. The resemblance is, however, so striking, that some care is required in distinguishing them.

P.S.—A few seeds of any other varieties of the order *Lobelia* would be thankfully accepted from any of your correspondents, those above named having been obtained with some difficulty from different sources.

Maryport, July 1851.

MEDICAL GAZETTE.

FRIDAY, JULY 25, 1851.

IN one of our numbers for March, we offered a few remarks to our readers on a proposition then recently made to establish in London a HOSPITAL for SICK CHILDREN. We are happy to be able to inform them that this proposition is now being actively carried into effect, and that there is a reasonable prospect of the Institution being opened for the reception of children within a short period. We learn from a paper before us, that a spacious house, with nearly an acre of ground attached to it, has been selected by the Committee, and is being rapidly fitted up for the purposes of a hospital. The situation of the new Institution is in Great Ormond Street, Queen Square; and considering the indispensable necessity of such an establishment being somewhat central, and its locality at the same time open, we do not think that a better spot could have been found. From a statement before us, we learn that in the new establishment there will be accommodation for sixty children, and that each little patient will have the same number of cubic feet of air as in the recently-constructed hospital of the Military Asylum at Chelsea while the rooms will be so arranged as to admit of the due classification of the patients. There will be a large day-room for convalescent patients, and, should the institution be liberally patronised by the public, there is sufficient space, without trenching on the garden, to fit up the premises for the reception of one hundred children.

The utility of such an Institution as a hospital for the special treatment of the diseases of children cannot be disputed. It is true that one Infirmary

has for some years been established, and has been productive of great benefit in providing for the diseases of the children of the poor within a limited area, on the south of the Thames. It is also true that our large hospitals have hitherto received applicants without respect to age, and in one of them, Guy's Hospital, a ward has been set apart for the reception of juvenile patients only; but still it cannot be denied that London, with its numerous charitable institutions, affords in this respect a striking contrast with the other great capitals of Europe. According to Dr. West, within the last twelve years no fewer than seventeen hospitals for children have been founded in the different cities of Europe; and he further remarks:—

“Nor is this the only proof of the deep interest which this good cause has awakened wherever public attention has been drawn to it, or of the progress which it has made; but I may mention that, in the year 1848, a year of great trouble on the Continent, the only house that was built in the city of Stuttgart was the Children's Hospital. Twelve years ago, the only hospital of this kind in the world was the Children's Hospital in Paris, endowed by Government, and maintained by all the means that a wealthy Government could bring to its support. At that time, however, there was a physician in Vienna who saw the need of the poor children, and how inadequately they were cared for in sickness; and from his own means, which were not large, he hired a house, and opened it as a hospital for sick children. For some time he carried it on with twelve beds, entirely at his own expense; but others were soon attracted by the spectacle of so much good so silently effected, and asked leave to join him in this good work. Hitherto, however, all such charitable institutions in Austria had been in the hands of the Government, and entirely under its control; it was therefore necessary to obtain permission before their benevolent wishes could be realised. The permission was granted, and this, the first Children's Hospital in Vienna, was also the first institution of the kind, in the Austrian

dominions, that originated in voluntary effort. It is since then that those efforts have been made in other countries which have ended in the formation of children's hospitals there; while not only has the hospital at Vienna flourished, but another has since been established in another part of the city, and is flourishing also."

There can, we think, be no doubt that the great mortality among the children of the metropolis from exanthematous diseases is to be ascribed to the want of means of isolation and proper treatment of the children of the poor. In a pauper dwelling in a crowded district there are no means of isolation or ventilation. The disease not only spreads to all around, but assumes a malignant and fatal character; and we fully agree in the view expressed by Dr. George Burrows, in reference to the new institution, that the benefits which will accrue from it will be extensive, and affect the middle and higher as well as the lower classes of society. They are thus described by this gentleman:—

"All of you who know anything of infantile disorders must be aware that they are diseases which spread rapidly by infection and contagion; and many of you must know what has occurred in your own circles, when you have been advised, on the appearance of disease in one of your children, to have that child removed from the domestic circle to a separate room, and to have an attendant of its own; and in this way some contagious disorder has been cut short in your own circles, and the remaining members of your family have been spared the visitation. This can be done very well in the houses of the affluent, *but it cannot be done in the dwellings of the poor*; for supposing a child in such a family to be attacked with scarlet-fever or measles, or any other infantile disorder, the disease is soon spread to other members of the family, thence to the family occupying the adjoining room, and so to all who live on the same staircase, and in the same house or the same locality; that being situated probably in some miserable court, or some dark narrow street, a focus for epidemic disease to come into a town.

By this institution, however, you may succeed, not merely in saving other members of the family first attacked, but the children of an extensive locality, from being affected with such diseases. This is one of the great benefits to be derived from an hospital for sick children, and upon this principle hospitals have been established in this and other towns for special diseases. And the benefits thus entailed on the community are very great indeed,—far greater than, perhaps, the eye of charity sees in the first instance, when its aim is merely to relieve the suffering individual. Perhaps I may venture to occupy your time for a few more minutes, in order to show how far a hospital for sick children will tend to the advancement of medical knowledge. It is true the different branches of medical science are in the present day enunciated and taught to our young men at the different great schools of the metropolis. It is perfectly true that in those noble institutions, the hospitals of this metropolis, there are ample opportunities of studying the diseases of adult age; but it is equally true that there can be but few children admitted into those hospitals: the result is, that the student is instructed in the theory of disease, and may attend a course of lectures on the diseases of children, but the teacher who has given that course of lectures is unable to give practical illustrations of them in the wards of the hospital; therefore I say there is a decided want of some institution of this kind, in order that young medical men, before they go into practice and undertake its responsible duties, may have an opportunity of obtaining more practical information. But perhaps you will say, Is there really anything so very special in the diseases of childhood, that it is necessary that they should be studied separately and distinctly from the diseases of adult age? Undoubtedly they have their peculiarities. All of you, no doubt, are more or less familiar with the constitutions of children; you know how changeable and volatile they are, even when in health. Sorrow and joy, laughter and tears, succeed each other with greater rapidity than I can express the idea; and that peculiarity of health is also the peculiarity of disease. Children in the midst of health are overtaken with disease, and if they fall into the hands of those who are in-

experienced in the course of the diseases of childhood, great mistakes are liable to be made; fever is excited, the whole system is disturbed, the nervous system is upset, and every symptom appears so threatening, that the anxious friends, and those who are not cognizant of these matters, think there must be inevitably a fatal termination to the attack; but he who is experienced in them knows that this condition is but a disturbance of the constitution preliminary to some eruptive disorder. He waits patiently, and knows that at the lapse of a number of hours, on the appearance of the eruption, great relief will be experienced, and therefore the child is not injured by any powerful remedies improperly applied. In the progress of disease in childhood the same thing occurs. The physician, or other medical attendant at the bed-side, can obtain no information from the patient; the little child is shy and retired with strangers, or it cannot or will not explain what it feels. He must divine the nature and progress of the disease by his knowledge of its symptoms; and the experienced eye will often see—when, according to ordinary views, everything seems tending to a fatal crisis—the dawning of a favourable change, and make glad the parent's heart. These are delightful duties for the experienced physician; but there are others which he has to perform, which are equally important, but very distressing. I have called to your attention and remembrance the peculiar constitution of a child, and its frequent variations when in health. So in disease, too, we can see sudden alternations of the symptoms. Sometimes, in some very painful disease, the child has been apparently in agony and torture, restless, complaining, delirious, and the friends and others standing by its bed-side have been distressed beyond measure. But all of a sudden, what do they observe? The child becomes tranquil, it is no longer in suffering, it becomes composed, apparently as if inclined to sleep. The anxious parents flatter themselves that the case is about to terminate favourably—the fever has subsided, a moisture has covered the skin, the child is quiet, and inclined to sleep; but the experienced medical man knows perfectly well that this is but the giving up of the vital powers,—it is but a lull that will lead to the fatal termination of the disease. I

say, then, it does require a special knowledge of the diseases of childhood to be able successfully to treat them."

We trust that these statements, which are creditable to the humane feeling and intelligence of the speaker, will have the effect of inducing the public and profession to co-operate with the Committee in carrying out these plans.

Various attempts have been made to create training establishments for nurses, so as to qualify females of a respectable rank of life, and of some degree of education, to act as attendants on the sick. There will be no better school for commencing this kind of tuition, the necessity of which is universally admitted, than in a Children's Hospital; and we concur with the Committee in thinking that the utility of the new establishment to the public will be thereby still further increased.

Of the financial state of the new establishment, we shall only remark, that, while donations and subscriptions have been already made on a sufficiently liberal scale to justify an early opening of the hospital to a limited number of patients, it is desirable that the yearly subscriptions should be increased, since upon this must depend the number of patients that can be received, and therefore the amount of good which will be conferred on the public.

Reviews.

Letters to a Candid Enquirer, on Animal Magnetism. By WILLIAM GREGORY, M.D., F.R.S.E., Professor of Chemistry in the University of Edinburgh. 12mo. pp. 528. London: Taylor, Walton, and Maberly. Edinburgh: Maclachlan and Stewart. 1851.

In the Preface to this work Dr. Gregory fortifies himself in his advocacy of Mesmerism, by a statement of the names of many scientific men who have professed their belief in the reality of Animal Magnetism, or who have pub-

lished facts of a similar nature to those which the author himself here brings before his readers. With reference to this part of the question, in order that our readers may, *in limine*, judge of the weight that should be attached to names, we quote the following passage from the body of the work, and add thereto the published opinion of one eminent authority, whose name is mentioned:—

“When such men as Sir David Brewster, Sir W. C. Trevelyan, Sir W. Hamilton, Dr. Simpson, Professor Forbes, Professor Bennett, and Professor Goodsir,—when men like these, veterans in science, though some of them are young in years, besides many others, have not only seen the facts, more or less extensively, but admit their importance, and have personally investigated into some of them, the time cannot be far distant when the subject of animal magnetism shall assume a scientific form” (p. 210).

Dr. Bennett, in the last published part of his Lectures on Clinical Medicine, discusses the Mesmeric phenomena, referring them simply to a want of the controlling power of the will or reason, by reason of the predominance of strongly fixed impressions, and adducing many well-known facts in illustration of this view. The following facts will, however, more clearly exhibit Dr. Bennett's opinions on this point: we refer our readers to the Lecture itself for a very instructive exposition of the true nature of these phenomena:—

“I consider it unnecessary to enter into any lengthened argument to refute the numerous hypotheses which ascribe these effects to external influences. I know of no series of well-ascertained facts capable of supporting such a doctrine. Lately, I have tried numerous experiments with the aid of those who believe in animal magnetism, all of which have only convinced me that no such principle exists, and that all the phenomena really occasioned depend on suggestive ideas communicated to the person affected.

“The indiscriminate performance of experiments on nervous individuals may be injurious. During the present session (1850-51), society in Edinburgh has been greatly agitated by the subject. Fashionable parties have been converted into scenes of experiments on the cerebral functions. Noblemen, members of the learned profession, and respectable citizens, have been amusing themselves in private, whilst public discourses and exhibitions to an unusual extent have been got up for the enter-

tainment of the public. On one occasion the Royal Medical Society was operated on; and if a proof of the correctness of the facts described be required, it will be found in the circumstance that the nervous aberrations noticed were readily exhibited in some of its most sceptical members. The result of this experiment has been an increased degree of nervousness in many individuals. I have been told that, in some educational establishments, girls and boys throw themselves into states of trance and ecstasy, or show their fixed eyeballs and rigid limbs for the amusement of their companions. Sensitive ladies do not object to indulge in the emotions so occasioned, and exhibit themselves in a like way for the entertainment of evening parties. Several instances are known to me where intelligent young men—students in this University—have, for a longer or shorter time, been incapacitated from following their ordinary occupations, and obliged, from want of attention and mental power, to stay away from their classes. Some of these, from a feeling of the injury they have sustained, have very properly refused to allow any experiments to be tried on them; and the parents of very sensitive young persons, from the obvious detriment their health has sustained, have also forbidden the repetition of these scenes. I think we are warranted in calling such a state of things ‘The Edinburgh Mesmeric Mania of 1851.’”

How far we should be warranted after these quotations in regarding Dr. Bennett as an advocate of, or convert to the doctrines of the Mesmerists, does not, in our judgment, admit of much question. It is clear that Dr. Gregory's interpretation of Dr. Bennett's admission of the importance of the facts he has witnessed must be received *cum grano salis*. Whether the adherence of the other eminent men named by Dr. Gregory be of the same qualified character, we have not the opportunity of judging.

Dr. Gregory's letters are dedicated to “His Grace George Douglass Campbell, Duke of Argyle, K.T., F.R.S.E., &c., &c., &c.” Is His Grace the “Candid Enquirer”? or has it appeared to the author that the prestige of a ducal coronet might help to promote the fortunes of Mesmerism? Dr. Gregory several times mentions the names of noblemen and baronets as among its practitioners.

The first three letters are devoted by the author to meet and refute all the objections that have prevented the progress of Animal Magnetism. The first of these is the prejudice which exists in

the minds of most people against the reception of anything that by its novelty and strangeness strikes the ordinary mind as inexplicable; and therefore, because unaccountable, it is regarded as absurd. We agree with the author that such objection is, *per se*, utterly untenable, and unworthy of a true cultivator of science, physical or metaphysical. Where, however, Dr. Gregory extends to the objections against Mesmerism the same reasoning that he applies to the discoveries of Newton, we cannot but join issue with him. The rejection of the hypothesis of Animal Magnetism cannot be for one moment put in comparison with the opposition to the reception of the theories of Copernicus, Columbus, Galileo, Newton, and Harvey.

The great difference between the cases—a difference which destroys all parallel—is, that these great discoverers had incontrovertible facts and data whence they deduced their principles; and these have been subsequently abundantly confirmed. But can it now, or will it ever, be said, that such is the condition of Mesmerism? Is not this subject confessedly imperfect? Are its professors agreed on its nature and character? Did Newton claim attention to his theory of gravitation until its data were all perfected, and placed beyond the power of cavil or dispute? Did Harvey announce his theory of the circulation, before his observations were sufficiently exact and numerous to confirm his inductions? Dr. Gregory must abandon this *argumentum ad hominem*, until the time arrives when the views which he advocates are matured; until then he may more wisely leave this line of reasoning to the makers of wild gratuitous hypotheses. The same argument is used by lunatics who cover the walls of their chambers with rhapsodies of incoherent words, and dignify their effusions with the titles of demonstrated theories.

We would not unceremoniously and uncourteously deny the facts brought forward by Dr. Gregory; but the utmost stretch of our credulity is not sufficient to permit us to adopt the interpretation put upon them by Mesmerisers. That they are real effects of a natural cause, and not in every case a deception, we are assured; as catalepsy, somnambulism, &c., they have long been known. But we do not therefore admit that they are the result of a *magnetic*, or *odylic* influence,

and why the term *Magnetism* is used at all we are quite at a loss to conceive. The facts alleged to be produced have nothing in common with magnetic phenomena.

Dr. Gregory observes, and probably with considerable justice, that the public displays of mesmeric phenomena cannot be relied upon; the presence of so many persons interferes with the results, according to the author, by the crossing of the magnetic influences, interfering with their action in the subject of the experiments; failure is the consequence, and failure in such cases, Dr. Gregory allows, is sometimes attempted to be covered by deceit; indeed, it has been proved beyond all contradiction that these are too often mere exhibitions of feats of legerdemain.

One objection certainly holds against Animal Magnetism, which we do not think that Dr. Gregory has at all removed. That objection is, that if the facts of Mesmerism be true, then one individual possesses, or may possess, such a power over another as totally to destroy his will, render him no longer a free agent, and, in fact, deprive him of responsibility, as in the most severe attack of Mania. If such be the case, it is obviously contrary to the intentions of the Deity, as manifested in the moral constitution of man. This point has been treated at some length by Dr. Maitland, whose pamphlet we brought before our readers some time since. We therefore only notice it here to observe that we do not think that Dr. Gregory has at all destroyed its force, by arguing from the analogy of other powers, endowments, and gifts of the Creator, which may be or have been abused and turned to evil. The mere fact of the possible suspension and assumption, by one individual, of the will, reason, and judgment of another, is at once, and *ipso facto*, a violation of the laws of man's moral constitution.

Even the exercise of what are termed the lower powers of Mesmerism, the mere sleep and its concomitants, has been shown by Dr. Bennett not to be without its direct injury to the physical man.

Dr. Gregory, however, disposes of some further objections of little or no weight,—*i. e.* that as a natural phenomenon it leads to scepticism; that it is not definable; that it is nothing more than an effect of the imagination; and

that it is of no practical value. The last mentioned objection must certainly await the ultimate decision of its truth or falsity, the essential character of Mesmerism. Its tendency will then be cleared up, and its utility made evident, or entirely dispelled.

The succeeding eleven letters are engaged upon the statement of the facts of Mesmerism, and the attempt to explain these by reference to Reichenbach's researches upon the peculiar power said to reside in magnets and some other bodies, of producing certain effects on the nervous system of a limited number of persons who are found to be susceptible to these influences.

The facts themselves are for the most part familiar to our readers; it will therefore not be necessary that we should occupy our space by a recapitulation. Dr. Gregory regards the various processes of Hypnotism, Electro-biology, Electro-psychology, Mesmerism, Ferromagnetism, &c. &c., as mere modifications, or different appellations, of the same state, which he prefers to call by the name of Animal, or Vital Magnetism, as not involving theories which may prove to be erroneous. It appears however to us, that the employment of the word "Magnetism" involves an explanation of the phenomena which is very far from proved, although taken for granted by the advocates of the "system." Magnetism is a polar and dual force; it cannot therefore be justly applied to designate a state in which there is neither polarity nor duality, nor any approximation whatever to these well-known physical conditions. Mesmerism is the only appropriate term: it then naturally takes its place with Hahnemannism, Mormonism, &c.

The greater portion of the marvels related by Dr. Gregory are clearly applicable upon the supposition of "suggestion." Thus, a person is brought into a disordered state of the nervous system by certain manipulations, and it is then suggested to him, or her, that she cannot perform this or that particular act,—and straightway it is found impossible. We are also inclined to think that many of the wonders of "thought reading," "divided consciousness," experiencing the influence of the magnetiser at considerable distances, &c. &c., would all, if closely scrutinised, resolve themselves into the effects of "suggestion."

Can the eyes of a person in natural sleep be kept closed by any act or manipulation on the part of a mesmeriser? If a power be communicable without anything material passing between agent and patient, it should, if not depending on mere mental impressions, be communicable in the healthy sleeping as in the waking state.

It has struck us repeatedly, on reading this work, that the author seems to have received at second-hand many of his most marvellous *facts*. The following are among some of the instances to which we allude. At p. 107, Dr. Gregory relates the case of a lady who finds herself suddenly magnetised, without any previous knowledge of the intentions of the operator, who is in another part of Edinburgh, at a distance of five or six hundred yards from her! All the circumstances are very minutely detailed; the author himself was in communication with both parties—but he was not present at the moment that the effect took place. We should be unwilling to throw any doubt upon a lady's word—politeness compels us to believe her perfectly sincere in her statements; still it is possible that a suggestion may have been made, which, in the disordered state of the lady's nervous system, had been afterwards forgotten: we are informed by the author, that mesmerised persons on returning to their ordinary waking state are unconscious of what has passed in their mesmeric sleep.

At page 164, Dr. Gregory, with respect to some of the predictions of clairvoyants, confesses that he has "no personal experience of them," — but nevertheless he puts their feats on record as *facts*.—*e. g.*

"The somnambulist will often predict the course of a disease and its termination in those persons with whom he is *en rapport*, or sympathy. This phenomenon has been frequently recorded, *but I have not hitherto had an opportunity of personally examining or verifying it.* I may allude, however, to one remarkable instance of this kind, in which *Adèle*, the somnambulist of M. Calaguet, predicted his death at the end of six years; and *I am informed on good authority** that he died at the time specified, from natural causes. There exists, also, a very striking case of a similar prediction, made by a sorceress or divineress in Venice, concern-

* These italics are our own.

ing the death, at different periods fixed by her, of three gentlemen, friends, who together consulted her. They all died at the times predicted. . . . I would not allude to this case, *were it not that I have it on the best authority*, and that it must be regarded as perfectly attested" (p. 167).

On the same page follows a similarly attested case. The author also states (p. 168) that illness and accident have been predicted, and the prediction "*appears to be well authenticated*." "In other cases, again, the clairvoyant is *said to have accurately predicted events*" (p. 168). "The same degree of prevision *has been alleged* as occurring with reference not only to letters, but to events of various kinds" (p. 169). Many other statements of a like character might be quoted, but the preceding are sufficient to induce us to regard much of Dr. Gregory's evidence on the nature of the facts of mesmerism as exhibiting too ready a credulity on his part, and as not amounting to proof.

Authority, however "good," "respectable," "trustworthy," ought not to be received without some mistrust on matters which contradict the universal experience of the operation of the laws of nature. Dr. Gregory, for instance, *has been told* that the magnetic power of some mesmerisers has been known to be great enough to lift a person from the ground and suspend him on nothing in the air (!), against all the laws of gravitation, which are thus superseded by this magical power. But Dr. Gregory *believes* this without having seen it. After this, we do not perceive that a man need stop at believing anything. Dr. Gregory is a professor, in the University of Edinburgh, of a science which requires the most exact scrutiny of facts, and the most rigorous examination of experiments, and the fallacies to which they are exposed. Now we think that, if he had admitted chemical theories on the loose evidence upon which he here receives and repeats these mesmeric marvels, he would never have attained the reputation as a chemist which he has long enjoyed.

If we mistake not, Adèle, whom Dr. Gregory quotes, has before now figured on the boards of London mesmeric stages, with a less successful result than is indicated by the author's appreciation of that individual's prophetic powers. It is a common saying that we must not believe a tithe of what we hear, and

only half of what we see. Certainly, under no circumstances does hearsay so entirely control and vitiate eyesight as in mesmerism: both operator and operated are ready and willing to see, hear, taste, feel, or smell whatever they are told, and to use their senses in any way that they are commanded.

Besides all the *facts*, statements, and opinions contained in the first part of this work, the author has embodied a large collection of cases in the second part. To these we can only refer our readers: we should not be able to quote a sufficient number of these to satisfy their curiosity.

We cannot pass over these without observing that Dr. Gregory argues upon the principles of phrenology as illustrated by mesmerism. We are somewhat surprised at this, as we never yet learnt that phrenologists had arrived at an agreement upon the number or seat of the organs of the mental faculties. All the supposed phrenological phenomena seem but suggested acting.

We must now bring to a close our notice of this work. In so doing we may observe that Reichenbach, whom Dr. Gregory so often refers to, is not a believer in animal magnetism, or, at least, in its higher developments; neither is Mr. Braid, to whose experiments the author also repeatedly refers. We may observe also that we cannot coincide in the favourable opinions expressed by the author upon the "Letters" of Miss Martineau and Mr. Atkinson. Surely he does not concur in all their sentiments?

Dr. Gregory has brought together in these letters nearly all that is at present known of mesmerism, and has earnestly advocated its claims; but he has not convinced us that the subject is one that deserves the attention bestowed upon it in some quarters. In our estimation, whether the facts be partly true or wholly false, the insuperable objection thus well put by Dr. Bennett deserves serious notice:—

"The great object of all who seek proper self-education is to control the emotions and passions, and regulate the imagination by the severer faculties of judgment, comparison, and attention. Hitherto medical men, so far from exciting, have done all in their power to prevent such phenomena as have been described; but, now that it has been shown that they may be produced in numbers of people by the ignorant and

mercenary, there is too much reason to fear that nervous disorders will increase among us."

Surely these results should be well weighed by medical experimentalists against the mere love of witnessing the marvellous.

Principles of Physiology, General and Comparative. By W. B. CARPENTER, M.D., F.R.S., F.G.S., &c. 3rd Edition. London: Churchill. 1851.

A WORK so well known to the profession as that now before us requires but a brief notice. It is with pleasure we announce the publication of a *third* edition,—a fact which proves that the labours of the author in one of the most important and interesting branches of medical science are duly appreciated. The present edition contains upwards of one thousand pages, in close type, and includes a mass of information not to be easily found even in a well-furnished library. Physiology, Zoology, Botany, and Microscopy, all lend their aid to the elucidation of the laws of life and development; and the style is such as to interest the reader, and to fix his attention upon the particular subject to which he has occasion to refer. We must also observe that the beautiful and accurate illustrations which accompany this edition (exceeding three hundred in number) make plain to the eye that in which description would fail, and materially aid the author in familiarising his readers with the results of numerous microscopical observations.

We have already had occasion to make frequent references to this volume, and we agree with the author that the third edition may be almost regarded as a new work. We are informed in the preface that its preparation has occupied Dr. Carpenter for a period of two years; and it is impossible to refer to any one section without being impressed with the untiring industry of the author in working out his subject.

It is our opinion, that whether for reference or study in the subject to which it specially refers, no better book than Dr. Carpenter's "*Principles of Physiology, General and Comparative*," can be placed in the hands of student or practitioner. It would also be a valuable addition to the library of every well-educated man, although not a member of the profession.

Annales d'Hygiène publique et de Médecine légale. Tome XLV. 1851.

THE medico-legal department of this volume, which embraces the quarterly numbers for January and April 1851, opens with the concluding article, by MM. Tardieu and Rota, on *The Goerlitz Case*, already fully detailed in the MEDICAL GAZETTE (vide vol. xlv. pp. 899, 944). Considering the historical evidence on which the belief of the so-called *spontaneous combustion* of the body has hitherto rested to be now overturned, and the scientific arguments elicited in the course of this important trial in disproof of its possible occurrence as unassailable, MM. T. and R. are yet disposed to conclude that enough has been advanced on this occasion to show that the tissues of the human body, under certain circumstances, may be in such a state as to burn with great facility, or even to support their own combustion. This conclusion is not altogether without support from known facts occasionally to be witnessed in practice, while it affords an explanation of such cases as the following, where the extent of destruction of the tissues by a low degree of temperature, and with a small consumption of combustible matter, contrasts strikingly with the difficulty experienced on ordinary occasions of consuming these even with large fires, as in the instance of the body of the victim of the unfortunate Professor Webster.* An elderly female, of intemperate habits, retired to her room one night in a state of intoxication. Next morning she was found dead, her body in a sitting posture, the back resting against the bars of a very small and low grate, in which there had been only a few smouldering embers at the time of her fall. While the clothes were but partially burned at the part which had been in contact with the grate, the soft parts over the whole of the upper and posterior aspect of the chest were deeply charred, and the burn, which was of a circular form, terminated by an abruptly-marked border, around which no marks of vital reaction were visible. Nor is this the only instance of a like sort which we could adduce from our own practice.

Arsenical Poisoning.—On this subject we have, at p. 131, the details of his

* Vide MED. GAZ., vol. xlv. pp. 431, 467, 506.

experiments, by M. Chevallier, for the detection of arsenious acid in various articles of food, drink, &c. The only novelty advanced by him is the discovery on this occasion of traces of the poison in faecal stains, and in the ashes from a hearth on which vomited matters had been burned. This last statement, but for the well-known accuracy and ability of the experimentalist, we should have had some difficulty in crediting, on account of the ready volatility of arsenic.

At p. 159 M. Aguilhon has reported a case of poisoning with *fly-powder*, a compound of metallic arsenic and arsenious acid. On its disinterment, M. A. detected arsenic, not only within the body, but also in portions of earth taken from different parts of the burial-ground. The wood of the coffin and the grave-clothes were entirely free from any trace of the poison. The reporter, however, has omitted to state whether or not the materials employed by him were tested, previous to his trials, with Marsh's apparatus,—a circumstance which vitiates the conclusions arrived at by him.

Poisoning with sulphate of iron.—A case of fatal poisoning with this salt, recorded at p. 155, will be found in a previous number.*

Poisoning by oysters, mussels, crabs, and certain sea and river fishes.—MM. Chevallier and Duchesne have furnished, at p. 387, the first part of a memoir on this subject, containing a great amount of information, both original and collected. None of the cases of poisoning with the oyster proved fatal, though fatal effects followed the use of the mussel (*Mytilus edulis*, L.) in seven of the instances here brought together. The parties in this case were of various ages, and of both sexes. Death followed the ingestion of the mollusca at periods varying from less than three hours to the end of the third day, or later. Though they succeeded in separating copper from the flesh of the oyster on one occasion, yet on another, where the oysters had produced poisonous effects, they failed in finding any traces of it. The occasionally injurious effects of this animal they attribute to its physiological state at and after its period of reproduction in the months of August,

September, and October, at which season they would have its sale to be prohibited by legal enactment.

The symptoms following the use of the poisonous mussel enumerated by MM. C. and D. do not differ from those recorded by our own toxicologists (vide Taylor's Med. Jurispr., p. 139-40). One peculiarity in regard to this poisonous food is noticed by them, which we have found to be common to this and other kinds of anomalous animal poisons. Their effects are not the same in different individuals. Thus we have seen one person who had partaken sparingly of this mollusc suffer severely; while of two others who had partaken much more largely, one escaped with complete impunity, and the other got off with a slight degree of nausea, followed by smart purging. On one occasion a servant had gastro-enteric irritation from drinking the water in which diseased mussels were cooked. From the cases recorded by our authors, it would appear that the cooking of the mussel neither increases nor diminishes its injurious properties. These they attribute rather to a peculiar idiosyncrasy belonging to certain individuals, than to any inherent poison generated in it. They were unable to verify the statement of Bouchardat, who announced that he had discovered in the mussel a quantity of copper sufficient to destroy life.

Folie instantanée.—At p. 215, Dr. Boileau de Castelnau furnishes us with a memoir on the medico-legal relations of a form of insanity for which he pleads the sanction of his countrymen, Marc, Pinel, Boys de Loury, Michu, and others, and which has been recognised in Germany under the designations of *Mania transitoria*, *Furor transitorius*, and that of *vorübergehender* or *transitorischer Wahnsinn*. The names applied to characterise it in France—*Folie instantanée*, *transitoire*, *temporaire*, *passagère*: *instantaneous*, *transitory*, *temporary*, *transient insanity*—like their German synonyms, sufficiently indicate the nature of this affection in the general case. When it leads to criminal actions, the mental disorder is shown in the crime itself, without any distinct antecedents or consequents calculated for its further elucidation. The illustrative instances detailed by this writer and others resolve themselves into some

* Vide MEDICAL GAZETTE, vol. xlvii. p. 307.

one or other of those insane impulses with which we are familiar in cases of homicidal and suicidal monomania, pyromania, kleptomania, &c.,—particularly the first-named of these. This will be at once evident from the consideration of the two following examples of Folie instantanée, which are all that have come under his own notice:—

The first was that of J——, a young woman, tried in 1849 before the Assizes at Gard. She had been seduced and deserted by her paramour. Becoming pregnant, she concealed her state, was delivered in secret, and destroyed her infant. With a pocket-knife she inflicted several wounds on its body, severed its head from the trunk, tore away the umbilical cord, and with it a part of the abdominal wall, and concealed the head under her bed. She was at no pains to efface the traces of blood; and when the crime was thus detected, she did not deny it, and showed that she was aware of the consequences. Nothing like ordinary insanity was exhibited in her conduct either before or after this event. It was proved, however, at the trial, that the woman's mother had been paralytic, and had given birth to other children, either immature or with enfeebled frames, and that her grandfather had died insane.

The jury admitted the seduction and its effects as attenuating circumstances, and the court, without passing from the charge, condemned the accused to hard labour for six months.

The other case was tried before the same court. A man, returned from work, addressed his wife, U——, with the words, "Gay one" (Gaillarde: a term which, applied to a woman, implies freedom of manner or laxity of conduct), "is not the soup ready?" upon which she inflicted on him a blow with a knife, of which he instantly died, when she sought to conceal the body.

The woman's previous and subsequent history threw but little light upon this apparently motiveless crime. She made no opposition to her arrest, although she effected her escape from the gendarmes, who had to rescue her from a pond into which she had thrown herself. Several members of the family had been insane, or subject to fits of ungovernable temper. She was declared to be of weak mind, and, during her latest pregnancy, had been seen to give

way to paroxysms of unprovoked fury. The result is not directly stated, although we gather, from the account given us, that the defence of insanity was not sustained.

M. B. de C. contends that persons of this sort are not fit objects for punishment, and recommends, instead, their being committed to asylums adapted for their moral, intellectual, and professional improvement.

The Criminal Statistics of France are discussed by M. Brunet in a short but interesting article at p. 230, derived from official documents. From this it appears that during the period of six years preceding 1847, 4,314 murders or assassinations had been perpetrated in that country in the modes subjoined, viz.:—

| | |
|----------------------------------|-------|
| Fire-arms | 1,835 |
| Sabres, swords, &c. | 44 |
| Stiletos, poignards, &c. | 196 |
| Knives | 726 |
| Sticks and canes | 201 |
| In other ways | 1,312 |

Of 496 cases of poisoning the poisons employed were as under, viz.:—

| | | |
|---|----|-----|
| Arsenic | in | 352 |
| Hydrochloric acid | " | 2 |
| Acetate of copper | " | 29 |
| Sulphate of ditto | " | 17 |
| Cantharides | " | 20 |
| Hellebore | " | 4 |
| Phosphorus | " | 2 |
| Laudanum | " | 2 |
| Sulphuric acid | " | 26 |
| Nitric acid | " | 5 |
| Extract of belladonna | " | 5 |
| Sulphate of iron | " | 1 |
| Ditto of zinc | " | 3 |
| White lead | " | 4 |
| Tobacco | " | 1 |
| Nux vomica | " | 5 |
| Mercury | " | 1 |
| Lead | " | 1 |
| Extract of colchicum | " | 1 |
| Poisonous mushrooms | " | 3 |
| Stramonium | " | 1 |
| Prussian blue (?) | " | 2 |
| Orpiment | " | 1 |
| Pounded glass | " | 2 |
| Rat and fly poisons | " | 5 |
| Root of <i>Ceanothe crocata</i> , | " | 1 |

Of 1,911 cases of rape in the ten years, from 1838 to 1847, there were committed:—

| | | |
|-----|----|-----------|
| 136 | in | January |
| 131 | " | February |
| 157 | " | March |
| 133 | " | April |
| 225 | " | May |
| 234 | " | June |
| 222 | " | July |
| 181 | " | August |
| 137 | " | September |
| 110 | " | October |
| 126 | " | November |
| 119 | " | December |

Of the cases tried before the Courts of Assize, from 1844 to 1847, the charges were:—Crimes against the person, 6,735, men,—1327, women; crimes against property, 17,729, men,—3701, women.

These crimes are thus arranged, viz.:—

| | Men. | Women. |
|------------------|---------|--------|
| Assassinations . | 1,007 . | 144 |
| Murder . | 655 . | 32 |
| Parricide . | 69 . | 20 |
| Poisoning . | 92 . | 91 |
| Infanticide . | 54 . | 587 |
| Domestic thefts. | 2,593 . | 1,479 |

The influence of the seasons on the frequency of these crimes will be seen below.

Crimes against the person:—

| | Per Month. |
|----------------------------|------------|
| Winter (Dec. Jan. Feb.). | 396 |
| Spring (March, April, May) | 451 |
| Summer (June, July, Aug.). | 509 |
| Autumn (Sept. Oct. Nov.). | 423 |

Crimes against property:—

| | |
|----------|------------------|
| Winter . | 1,413 per month. |
| Spring . | 1,226 " |
| Summer . | 1,118 " |
| Autumn . | 1,215 " |

Statistics of the Morgue.—These, for the decennial period preceding 1847, are presented to us by M. Devergie, as furnished by him to the Prefect of Police at Paris. They embrace a number of points interesting in a moral as well as a medical aspect. During the time in question, 2,331 male and 520 female bodies were brought to this noted receptacle for all the unclaimed dead in and around the French capital. Of these, 296 were premature, and 197 mature infants; 1,766 were cases of suicide; 616 fatal accidents; 22 victims to the political disturbances in May 1839; and 381 cases of sudden death. 2,402 individuals were buried at the public expense, and only 449 at that of their families. The number of infants brought to the Morgue is greatly on the

increase; the premature births especially, which, from 1841 onwards, are five times the numbers in 1836. The increase in 1847 is said to have been frightful. The total number of bodies exposed at the Morgue is to the inhabitants of Paris as 1 to 5,486. Of the suicides, 1,398 were males, and 368 females. Amongst 1223 of those who were identified, 119 were widows or widowers, 490 married, and 545 unmarried persons. At the top of the list of male suicides are day labourers (Journaliers) and soldiers; and of female suicides, sempstresses (Couturières). More than two-thirds of the male, and nearly five-sixths of the female suicides, were cases of drowning. Next to drowning, the mode of death was hanging and fire-arms amongst the males, and precipitation from a height, and suffocation with the fumes of charcoal, amongst the females who destroyed themselves. Of the assigned causes of these suicides insanity stands highest in both the sexes. Compared with the advance of the population, suicide has rather decreased than otherwise of late in Paris.

The principal subjects treated in the department of the Journal devoted to Medical Police are the following:—The Supply and Distribution of Water in Paris, by M. Chevallier; A Biographical Notice of the late Dr. Leuret, by M. Trélat; Some Remarks on the Means successfully adopted by M. Semmelweis for arresting the spread of a late extensive Puerperal Epidemic in the Maternity Hospital at Vienna, and which was simply washing the hands of the pupils and nurses in liquid chlorine, or chloruret of lime, to obviate the risk of contaminating the healthy on the part of those who had been engaged about the sick, particularly after death; an article, by Dr. Joire, on the Sanitary Condition of the Houses of the Lower Classes; and the continuation, from a previous number, of the Mortuary Statistics of Paris for the ten years ended in 1838.

The Teeth and their Preservation. By CHARLES VASEY, Dentist. Small 8vo. pp. 31. London: Renshaw. 1851.

THE author here professes to supply to the public "the want of a little knowledge" which he considers leads to the destruction of the teeth. The information thus tendered will, we suppose, be of very little utility, unless peradventure to Mr. Vasey, Dentist.

Proceedings of Societies.

SURGICAL SOCIETY, PARIS.

July 9, 1851.

Employment of Galvano-puncture in the Treatment of Aneurism.

M. BOINET read a report on a memoir by M. Vial. The reporters stated that they did not participate in the sanguine expectations of some persons, that galvano-puncture will supersede ligature or compression in the treatment of aneurism. Numerous accidents had occurred, and upon the means of the prevention of these the operators were not agreed. Considerable difficulty exists in adapting the strength and mode of application of the current to each case. One fact only appears to be constant in the use of the galvano-puncture, and that is the coagulation of the blood; but it appears that this cannot be obtained by a single operation, unless the current be strong, and then other ill effects are likely to occur, while with a feeble current the coagulation is uncertain, and often does not take place at all.

M. GIRALDES observed that the priority of the introduction of galvanism in the treatment of aneurism was due to Mr. Benjamin Phillips, of Westminster Hospital, who had transmitted a letter on this subject to the Royal Academy of Sciences, Paris, in 1845.

ACADEMY OF SCIENCES, PARIS.

June 30, 1851.

The modifying influences exerted upon Animal Heat by Therapeutic agents.

MM. DUMERIL, DEMARQUAY, and LECOINTE, addressed to the Academy the conclusion of their experimental researches. This fourth and last part of their essay had for its object the influence of narcotics on animal temperature. The authors had experimented with opium, solanaceæ, and cyanuret of potassium. The preparations of opium employed had been Rousseau's Laudanum,* Acetate of Morphia, and Codeine. Nine experiments were performed with these substances, and in every instance the temperature was lowered, sometimes with great rapidity. Among the Solanaceæ were tobacco, belladonna,

* Rousseau's Laudanum: "Opium choisi, 125 gram.; Miel blanc, 375 gram.; Eau chaude, 1875 gram.; Levure de bière fraîche, 8 gram.; dose, six à dix gouttes."—*Nouveau Formulaire*, par A. Bouchardat.

stramonium, and henbane; by the latter, the temperature was raised, whilst it was lowered by the others. The cyanuret of potassium depressed the temperature of animals. All these, however, required to be given in full doses in order that the effect should be produced, as the influence of repeated small doses was successively neutralized by the constitutional powers.

Syphilization.

M. AZIAS TURENNE addressed a letter in which he stated that the inoculation of syphilis as a means of prevention of the disease had been practised at Turin, by Dr. Sperine, and that that physician had met with the same success as had attended his own experiments related to the Academy in November last.*

Rupture of the Ligamentum Patellæ.

The facts related by M. BAUDENS in the essay submitted by him were used by the author to prove that that injury is the effect of a sudden and violent spasmodic contraction of the extensor muscles of the leg. The rupture of the tendon is favoured by a circumstance which no one previously to himself had pointed out. It is not sufficient, according to M. Baudens, that the tendon be inferior in strength to the muscles of the leg in order that rupture should occur, but it is necessary that these muscles should, for the time, acquire increased power. This obtains at the moment when, to avoid a fall, the joints are, as it were, convulsively set in motion; the extensor muscles of the thigh contract spontaneously, and thus acquire all the power to be gained from the long arm of a lever represented by the trunk and superior extremities projected on the opposite side, in order to restore the equilibrium of the body. The knee slightly bent augments the energy of the extensor muscles by rendering tense their fibres, and by exaggerating the prominence of the patella. It may be understood how this increased power may cause rupture of the patella, or of its ligament, or of the strong tendon of the muscles themselves.

July 7, 1851.

Laws of the attractive force mutually exerted by liquids.

M. BECLARD read the first part of an essay on this subject, intended as a contribution to the history of absorption and nutrition. The following are the author's conclusions:—

1. When two liquids are capable of mixing, in part or entirely, the mixture will

† See MED. GAZ. vol. xlv. p. 989.

take place even if an organic membrane be interposed.

2. The mixture of liquids takes place by virtue of a law which is different in each case. When two liquids are presented to each other, the specific gravity of either does not determine the proportions in which they commingle. The interposition of a membrane between two miscible liquids shows the inequality of the attractive force of the two liquids.

3. The attractive force of liquids appears to be in relation to their specific heat. In the phenomena of endosmosis, liquids which have the greatest specific heat tend towards those that have a lower; or, in other words, liquids of a low specific heat abstract those of higher with greater force than they are attracted by them. If the generalization may be permitted, it may be said that the molecules of liquids attract in an inverse ratio to their constitutional heat.

4. What is thus true of liquids obtains equally with gases taken in the same volume and under similar pressure.

5. The phenomena of endosmosis may therefore be regarded as molecular phenomena of latent heat.

6. This explains why water, which has the greatest specific heat, passes by endosmosis towards all other liquids; why the addition of water to liquids changes the direction of the current; why animals which undergo a complete renovation of their materials continually lose water by the urinary, cutaneous, and pulmonary secretions, in order to fit the economy to receive the materials in a state of solution, for the processes of nutrition and heat.

Hospital and Infirmary Reports.

CLINIQUE DES DEPARTEMENTS.

Complicated case of Lithotomy. Under the care of M. J. J. CAZENAVE, of Bourdeaux, Corresponding Member of the Academy of Medicine of Paris.

CASE.—M. Vieuze, sixty years of age, a shipbuilder, a man of great intelligence, was active, industrious, and had bestowed much time and attention on the duties of his calling, before he was attacked by the disease. He was of a sanguine temperament, and had become very large and obese at forty years of age; he possessed an excellent constitution. His sufferings with reference to the bladder and urethra dated from the age of twenty, when, from a fall from his horse, he received injury to the perineum and neck of the bladder. Six years later, a similar accident caused slight hæmaturia. In 1842, two falls from his horse produced

severe contusion of the perineum and profuse hæmaturia.

When first seen by M. Cazenave, he had suffered greatly from pain in the bladder and its vicinity during five years; he had frequent micturition, occasional fever: the urine, often greyish and purulent, was at other times sanguinolent, decomposing rapidly with a strong ammoniacal odour. At this time, M. Vieuze experienced cutting pains and a sense of weight at the lower part of the bladder, in the perineum and anus, extending along the course of the ureters to the kidneys: he also walked slowly and with difficulty. For a year previously it had been necessary to empty his bladder with an instrument.

The perineum was scarred by three large cicatrices, the consequences of incisions made in opening the abscesses produced by the former accidents. The prostate, examined by the rectum, was felt to be hard and large. A silver sound readily passed the urethra without meeting with any stricture; it was, however, arrested at the neck of the bladder by a hard substance, evidently a calculus. Notwithstanding this permanent obstacle, M. Vieuze could, by dint of great efforts, pass urine without the use of the catheter; most frequently, however, he was obliged to empty his bladder by the help of a small gum-elastic catheter, which he contrived to introduce after various manœuvres. M. Cazenave could only manage to pass the catheter, with considerable difficulty, through a narrow groove between the two calculi. Assured as he was of the existence of two calculi, M. Cazenave was desirous of satisfying himself on this point by the use of a silver catheter of a very small size and nearly straight. After several attempts, he succeeded in traversing the passage between the calculi, and detecting the existence of several smaller concretions beyond these, and against which he could strike the end of the instrument.

The knowledge of these unfavourable circumstances occupied the attention of M. Cazenave, and caused him some difficulty in answering the anxious inquiries of the patient as to the reasons for delaying the operation. After due reflection upon the case, M. Cazenave subjected the patient for several days to a treatment of warm baths, diluents, aperients, &c., preparatory to lithotomy.

The operation was undertaken on the morning of the 30th of December, 1847. MM. C. Pujos, Fauré, and Cazenave, repaired to the residence of the patient, where they met several assistants. It had been determined to operate by lithotomy, at the same time that the operator was prepared, in case of emergency, with the means for the performance of the lateral or high operation according to necessity. The patient having been

conveniently placed, chloroform was administered by M. Fauré for ten minutes. The crushing instrument was attempted to be passed, but at that moment M. Vieuze was suddenly seized with a violent fit of anger. When he became calm, more chloroform was administered. The *brise-pierre* having a short beak was introduced into the bladder, and the calculi could be detected, by M. Cazenave's colleagues. The operator ineffectually tried, by various manœuvres, to seize the calculi one after the other, and to break them: sufficient space was wanting; the branches of the instrument were prevented from moving freely, the calculi were arrested at the neck of the bladder, and pressed as in a vice. M. Cazenave was therefore compelled to relinquish his object, and to proceed by another method. A middling sized catheter having been introduced as far as the calculi, several vain attempts were made to pass the instrument by the neck of the bladder, or by the passage which had formerly served, although with difficulty, for voiding the urine. Under these circumstances M. Cazenave was obliged to have recourse to an operation similar to that of Celsus, in imitation of some skilful operators who have adopted it in a small number of exceptional cases. M. Cazenave made an incision in the membranous portion of the urethra on the silver catheter. A sound was passed through the wound until it reached the calculi; the neck of the bladder and the prostate, were divided on the left side of the raphe to a sufficient extent to admit the passage of a catheter into the bladder. By means of this instrument, a calculus immediately behind the two preceding was reached. With some difficulty, the catheter was brought into a vertical position in the middle line, and maintained there by an assistant. M. Cazenave was surprised to find that he could not pass the double lithotome into the bladder without great difficulty, and only by separating from one another the calculi, with which the bladder seemed to be filled. It was impossible to separate the blades of the instrument, and it therefore became necessary to have recourse to the bilateral operation. Two incisions, about eight lines in length, were made with a strait bistoury through the superior segments of the prostate on each side. In this manner, and by the aid of multiple incisions, on the principle of M. Vidal's quadrilateral lithotomy, a large space was laid open, without destroying the prostatic circle, or wounding either the rectum or the arteries of the perineum. Several calculi were broken by strong forceps and three were removed entire. A fresh exploration with the index finger of the right hand discovered three large calculi,

which could not be detached by the finger, the curette, or any instrument. It was the opinion of the operator that two of the calculi were encysted in the sides of the bladder, while the third and largest was adherent to the base of the bladder. M. Cazenave passed a probe-pointed bistoury between each calculus and the membrane by which it was encysted, and having divided the latter, the concretions were detached, but they could not be extracted without being broken up, by reason of their large size. It is extremely rare, observes Boyer (a high authority upon this subject), to meet with a calculus which is not encysted, but adherent to the surface of the bladder; and when such a circumstance does occur, the adhesions are so slight that they are readily broken down. M. Cazenave remarks that he has here opposed to the vast experience of Boyer a case which modifies the practical inference from the above statement, inasmuch as the adhesions in this instance were so firm and numerous that it was only by repeated attempts that they were destroyed, without transfixing the bladder and injuring the rectum. The risk was also incurred of inducing severe inflammation of the bladder, if the advice of Boyer had been followed, which consisted in shaking the stone daily, and acting upon it by solvent injections. M. Cazenave, therefore, determined to detach the calculus by a more certain and expeditious proceeding. Having, by the finger of an assistant in the rectum, forcibly elevated the fundus of the bladder, M. Cazenave, with the index finger of the left hand, carefully examined the points of adhesion, and with the most extreme caution destroyed them by means of a probe-pointed bistoury, separating the lower surface of this calculus, which had attained the size of an hypertrophied prostate in an old man. In this way, the numerous processes of the membrane that had penetrated the anfractuositities of the calculus were detached, and the stone having been broken down, the fragments were easily removed.

Careful explorations and washing out the bladder with warm water terminated this laborious operation, which had lasted thirty-five minutes, during the whole of which time the patient was skilfully kept under the influence of chloroform by M. Fauré; by which means the usual restraint was rendered unnecessary. The patient remained motionless the whole time, and on waking was not conscious of anything that had occurred. A slight hæmorrhage which took place was regarded as rather salutary than otherwise, and to have contributed to the very favourable result of the operation.

Medical Intelligence.

THE LAW OF LUNACY.

ON Thursday the 17th inst. a meeting of the Association of Medical Officers of Hospitals for the Insane was held by appointment at 12 o'clock, at Freemasons' Tavern: Dr. Conolly, being the senior member of the Society, was voted in the chair. The following members, with others, were present:—Dr. Bucknill, of the Devon Asylum; Dr. Huxley, Kent Asylum; Dr. Stuart, Belfast Asylum; Dr. Wintel, Asylum, Oxford; Dr. Kirkman, Suffolk Asylum; Mr. Diamond, Surrey Asylum; Dr. Boyd, Somerset Asylum; Mr. Prosser, Asylum, Leicester; Dr. Fox, of Northwoods; Dr. Munro, of Bethlem; Dr. Lloyd Williams; Dr. F. Winslow; Dr. Nesbitt, of the Northampton Asylum; Mr. Mallam, Hook Norton Asylum; &c.

The Association has been in operation some years. The meetings have hitherto been held in the provinces, at or in the neighbourhood of the various County Asylums. It was, however, determined this year to summon a meeting of the Association in London, in order to afford the members living in the metropolis an opportunity of discussing with their provincial friends some important matters of business. As a preliminary matter the question arose as to the organisation of the Society. The Association has always met annually in the provinces, and has been confined to medical gentlemen connected with county or public lunatic asylums.

It was proposed and carried that medical proprietors of private Asylums should be eligible as members, and a number of gentlemen were immediately elected. It was also resolved that for the future the annual meetings should take place in London, the second week in July, and that the members of the Association, resident in and near London, should also hold quarterly meetings in the metropolis, for the dispatch of business. The condition of the criminal lunatics was then brought under the notice of the Society by Dr. Conolly; and after a long discussion, in which Drs. Boyd, Nesbitt, and Winslow took part, it was agreed to present a petition to government for the establishment of an institution, apart from Bethlem, exclusively for the reception of persons acquitted of crime on the plea of Insanity.

The unfortunate, desolate, and unhappy condition of the criminal lunatic was feelingly dwelt upon by all the speakers, and it appeared to be the unanimous opinion of

the Association that sufficient attention had not been paid to their state. It was thought that great good would result from the separation of the criminal from the other lunatics confined in Bethlem and other public asylums. The state of the laws relating to the insane was then fully discussed. It appeared to be the opinion of the Association that the Lunacy Acts were greatly defective, and that the whole of them required careful revision. Nearly all the speakers pointed out most glaring errors in the construction of the Acts of Parliament bearing upon the management of public and private asylums and the care of the insane. It was proposed that a Committee of five members of the Association be formed to consider the subject. The following gentlemen were nominated:—Dr. Corsellis, Dr. Conolly, Dr. Forbes Winslow, Dr. Boyd, and Dr. Nesbitt. It was also proposed and carried that Dr. Winslow be appointed Secretary to the Committee; that he should communicate with the various members of the Association, and obtain from them suggestions as to the amendment of the law, and embody them, with his own views, in an official shape for the consideration of the Government and the Commissioners in Lunacy. The inquiry which Dr. Winslow was authorized by the Association to make was to extend to all the Lunacy Acts, embracing, also, the enactment relating to the administration of the property of lunatics, which was considered unjust and defective in its operation. After the dispatch of other business, the Association agreed in a body to visit Colney Hatch and the Surrey County Asylum, with the view of inspecting their arrangements. The first quarterly meeting of the Association is to be held in London early in September, when important matters of business are to be considered.

PARLIAMENTARY GRANT TO THE ROYAL COLLEGE OF SURGEONS.

ON the vote for £15,000, for 1851, towards the erection of an additional museum, and for enlarging the theatre of the Royal College of Surgeons, for the delivery of the Hunterian lectures,

The CHANCELLOR of the EXCHEQUER said, many years ago, Mr. John Hunter, the most celebrated surgeon, perhaps, which this country ever produced, accumulated a collection of anatomical specimens of great value, which eventually became so extensive and valuable, that they were bought by the country, and ultimately committed to the care of the College of Surgeons. Since that museum had been committed to their care, the College of Surgeons had most faithfully discharged the trust reposed in them.

They had themselves greatly added to the museum at a cost of no less than £189,000, and thrown it open to the public. Having spent that very large sum of money, which they were not bound to do, they found themselves without adequate funds to enlarge the museum and theatre, as was their wish. Under these circumstances they had applied to the Government for assistance, and the Government proposed to grant them £15,000 with that view, to which he trusted the committee would give its assent.

Colonel DUNNE and Sir R. INGLIS each supported the vote, which was agreed to without a division.

CÆSAREAN OPERATION.

IN a short paragraph in our last number it was stated that the recent operation on a female at Guy's Hospital was performed by Dr. Oldham. It appears, however, that the operation was performed by Mr. Alfred Poland on a patient under the care of Dr. Oldham.

ROYAL COLLEGE OF SURGEONS.

GENTLEMEN admitted members on the 18th inst.:—Messrs. C. Le G. Brereton—J. Graham—J. Mudge—C. H. Tovey—R. V. Skinner—T. Ligertwood—J. E. Davies—T. D. Wheatley—M. C. Furnell—and J. P. Cooper.

BOOKS & PERIODICALS RECEIVED

FOR REVIEW

DURING THE LAST THREE WEEKS.

On the Infectious Origin and Propagation of Cholera. By Alexander Bryson, M.D. Surgeon, R.N.

The Mesmeric Mania of 1851. By J. H. Bennett, M.D. F.R.S.E.

The New London Pharmacopœia, translated and arranged in a Tabular Form, with the Edinburgh and Dublin Pharmacopœias, shewing at One View the Differences in the Formulæ of the Three Colleges, &c. By Peter Squire, M.R.I. Annuaire de Chimie, 1851. Par E. Millon et J. Nickels.

Lunatic Asylums, Ireland. Fifth General Report, 1851.

Twenty-first Annual Report of the Belfast District Asylum.

Sleep and Dreams. Two Lectures, by J. A. Symonds, M.D.

Singular Specimens of the Edinburgh Practice of Criticism. By J. J. Griffin.

Casper's Woehenschrift für die gesammte Heilkunde. Nos. 21 to 24, 24 Mai to 14 June, 1851.

Comptes Rendus. Nos. 24 et 25, 16 et 23 Juin, 1851.

Edinburgh Medical and Surgical Journal. July 1851.

AMERICAN PUBLICATIONS.

Quarterly Summary of the Transactions of the College of Physicians of Philadelphia. Nov. 1850 to Jan. 1851.

Philadelphia Medical Examiner. May and June 1851.

British American Medical and Physical Journal. July 1851.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, July 19.

| BIRTHS. | | DEATHS. | |
|-----------|------|-----------|-----|
| Males.... | 719 | Males.... | 425 |
| Females.. | 688 | Females.. | 448 |
| | 1407 | | 873 |

CAUSES OF DEATH.

| | |
|--|-----|
| ALL CAUSES | 873 |
| SPECIFIED CAUSES | 872 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 209 |
| <i>Sporadic Diseases, viz.—</i> | |
| 1. Dropsy, Cancer, &c. | 85 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 42 |
| 4. Heart and Bloodvessels..... | 112 |
| 5. Lungs and organs of Respiration | 51 |
| 6. Stomach, Liver, &c. | 14 |
| 7. Diseases of the Kidneys, &c. | 15 |
| 8. Childbirth, Diseases of Uterus, &c. | 11 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 5 |
| 10. Skin..... | 25 |
| 11. Premature Birth | 35 |
| 12. Old Age | 4 |
| 13. Sudden Deaths..... | 26 |
| 14. Violence, Privation, Cold, &c.... | |

The following is a selection of the numbers of Deaths from the most important special causes:

| | | | |
|--------------------|----|------------------|-----|
| Small-pox..... | 21 | Convulsions..... | 22 |
| Measles..... | 21 | Bronchitis | 39 |
| Scarlatina | 6 | Pneumonia | 55 |
| Hooping-cough | 34 | Phthisis | 110 |
| Diarrhœa..... | 64 | Lungs | 11 |
| Cholera..... | 8 | Teething | 7 |
| Typhus..... | 32 | Stomach | 8 |
| Dropsy | 13 | Liver | 7 |
| Hydrocephalus | 24 | Childbirth | 7 |
| Apoplexy | 14 | Uterus | 5 |
| Paralysis | 15 | | |

METEOROLOGICAL SUMMARY.

| | |
|---|--------------------------------|
| Mean Height of the Barometer | 29.64 |
| Self-registering do. ^b | Thermometer ^a |
| | Max. 82° Min. 37° |

^a From 12 observations daily. ^b Sun.

RAIN, in inches, .59.—Sum of the daily observations taken at 9 o'clock.

NOTICES TO CORRESPONDENTS.

The papers of Dr. Wells, Mr. Richardson, Dr. Ballard, and Mr. Hewer, will be published in the following number.

CORRIGENDA.—At p. 112, col. 1, line 19 from top, for "pulgs," read "plugs."—P. 117, c. 2, in leader, line 18 should be line 17.—P. 120, in note at foot of col. 2, for "Joel Dennys," read "Jael Denny."—Page 121, col. 2, line 40, for "epileploid," read "epileptoid."—P. 127, col. 1, line 22 from foot, for "was," read "were."

Lectures.

LECTURES

ON

TUMOURS,

Delivered in the Theatre of the Royal College of Surgeons of England.

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LECTURE V.—PART II.

Fibroid or fibro-plastic tumours—Origin of the name—Their apparent structure—Usual seats and relations—sectional and microscopic characters—Cases of the disease—its aptness to recur—Cases apparently of a malignant form—Account and examples of a peculiar form of recurring fibroid tumours, and of malignant fibrous tumours, with observations on the diseases that seem intermediate between the innocent and the malignant.

FIBRO-PLASTIC TUMOURS.—M. Lebert* has given this name to a group of tumours which he first clearly described. The characters of the group are, in many specimens, well marked, and quite distinct from any other species of tumour that I have yet seen; but I must admit myself unsure at present of the exact boundaries and relations of the group. It may, indeed, seem to some that it would be more prudent not to devote a separate description to these tumours; but our conceptions of well-settled species are made so vague by including too wide a range in our descriptions of them, that the inconvenience of premature subdivision will be less than that of indefinite generalities.

The fibro-plastic tumours bear a slight resemblance to both the fibro-cellular and the fibrous, in their general appearance and usual history; but the relation of these several groups may, perhaps, be more strongly indicated by the existence of intermediate forms, and, as Lebert implies, by the fact that the fibro-plastic tumours are, in great part, composed of microscopic bodies such as are found in ordinary granulations, in progress of developing fibro-cellular or fibrous tissue. It may be thought that, as, among the fibrous tumours, we may find some composed of nucleated blastema, which is one of the forms rudimental of fibrous tissue, so, in these, we may have examples of masses

composed of such varieties of nucleated cells as are found in the other most usual rudimental form of the same tissue.*

The term "fibro-plastic" is employed by M. Lebert in consideration of these cells, and to imply that the tumours are principally composed of those forms of elongated or caudate nucleated cells which he names "fibro-plastic," which some have called "fibro-cells," and which Schwann showed in progress of development or moulding into fibres. Lebert employs this term instead of "sarcoma," or "simple sarcoma,"—the name under which he believes most of the specimens of this tumour were included before his time, as, indeed, they still are by some writers. One can hardly doubt the propriety of dismissing all such names as "simple sarcoma," under which so much confusion and error have been registered; and the term proposed by M. Lebert may well be employed till a better history of the tumours grouped under it may enable us to designate them better.†

The fibro-plastic tumours may be found in many situations. Those which I have been enabled to examine completely have been on the upper and lower jaws, in the mammary gland, and in the neck, near the thyroid gland. M. Lebert mentions, besides these situations, the bones in general, the eyelids and conjunctivæ, the subcutaneous tissue, the cerebral membranes,‡ and the uterus.§

In connection with this variety of place, they may vary in external form; but their tendency is to the spherical shape. According to their general consistency, M. Lebert describes two principal varieties—a softer and a firmer. The softer variety, exemplified by the aural polypus, is yellowish, succulent with thin yellow fluid, soft but elastic, rather tough, and, in both general and microscopic characters, like the sub-

* On this double plan of development of fibro-cellular and fibrous tissue see Lectures on Repair and Inflammation, MEDICAL GAZETTE, 1849-50.

† The analogy of other innocent tumours makes it probable that we shall be able to trace a likeness between those of the fibro-plastic kind and some of the natural structures. Their minute structures bear, indeed, a resemblance to those of granulations; but it will be well to keep in mind that the cells with many nuclei, which are, I think, most characteristic of them, and often most abundant, are very rare in granulations. They have made me suspect that the more proper homology of these tumours may be found in their likeness to the glands without ducts, especially to the thyroid gland.

‡ See on these, more particularly, a paper by Lebert in Virchow and Reinhardt's Archiv., B. iii., H. iii. 1851.

§ Structures like them form, also, according to him, many specimens of epulis, and the polypi of the external ear. It is probable that the two tumours of the jaw and the conjunctiva to which Müller refers (On Cancer, p. 19), under the name of "benignant albuminous sarcoma," were of this kind.

* Physiologie Pathologique, t. ii.; and Abhandlungen aus dem Gebiete der praktischen Chirurgie.

stance of exuberant weak granulations.* The firmer variety is that which alone I have been able to recognise as a distinct tumour, and which alone, therefore, I shall especially describe.

The tumours of this variety, then,—the proper fibro-plastic tumours,—are usually well defined, and either invested with a fibro-cellular capsule, or else easily separable from the surrounding tissues. They feel like uniformly compact masses, but are in different instances variously consistent. The most characteristic examples are firm; and (if by the name we may imply such a character as that of the muscular substance of a mammalian heart) they may be called “fleshy.” Others are softer, in several gradations to the softness of size-gelatine. Even the firmer are brittle, easily crushed or broken; they are not tough, nor very elastic, like the fibro-cellular or fibrous tumours; neither are they grumous or pulpy; neither do they show a granular or fibrous structure on their cut or broken surfaces.

On section, the cut surfaces appear smooth, uniform, compact, shining, succulent with a yellowish, not a creamy, fluid. A peculiar appearance is commonly given to these tumours by the cut surface presenting blotches of dark or livid crimson, or of a brownish or a brighter blood-colour, or of a pale pink, or of all these tints mingled, on the greyish white or greenish basis-colour.† This is the character by which, I think, they may best be recognised with the naked eye, though there are diversities in the extent, and even in the existence, of the blotching. The tumour may be all pale, or have only a few points of ruddy blotching, or the cut surface may be nearly all suffused, or even the whole substance may have a dull modena or crimson tinge, like the ruddy colour of a heart, or that of the parenchyma of a spleen.‡ The presence of cysts containing serous or bloody fluid may modify their appearance, but without obscuring their more essential characters; or, again, varieties may be connected with the locality of the tumour; such as, *e. g.*, that when they grow on or within bones, small osseous particles are commonly scattered through them.

* I have already said that all the aural polypi I have been able to examine were of simple fibro-cellular texture: perhaps they may acquire a fibro-plastic character from lymph effused in inflammation.

† Lebert says the greenish-yellow colour that they may show depends on a peculiar sort of fat, which he calls Xanthine (Abhandl. 127).

‡ I believe that many of what have been named spleen-like tumours of the jaws have been of this kind. The colour they present is not due only to blood in them; more of it is appropriate to their texture, as that of the spleen is or that of granulations.

However, among all these varieties, the fibro-plastic tumours are seldom difficult to recognize; they are as well marked as most of the species, and with microscopic help can very rarely be mistaken. The microscope shows that nearly the whole mass is composed of cells and other corpuscles, of which the following are the chief forms:—

1. Cells of oval, lanceolate, or angular shapes, or elongated and attenuated like fibro-cells or caudate cells, having dimly dotted contents with single nuclei and nucleoli.

2. Free nuclei, such as may have escaped from the cells; and among these, some that appear enlarged and elliptical, or variously angular, or elongated towards the same shapes as the lanceolate and caudate cells.

3. As the most peculiar form,—large, round, oval, or flask-shaped cells, from $\frac{1}{300}$ to $\frac{1}{1000}$ of an inch in diameter, which contain from two to ten or more oval, clear, and nucleolated nuclei, imbedded in clear substance. These are “parent cells,” or “brood cells,” such as one may find sometimes in actively growing granulations, and such as exist among the essential structures of the thyroid gland.

All these forms of corpuscles lie indiscriminately placed in a dimly granular substance, with abundant granular matter and free nuclei; or else, a material thus composed is traversed by filaments, and bundles of fibro-cellular tissue, and blood-vessels.

Such are the microscopic characters of the fibro-plastic tumours, and these as sufficiently distinguish them from all other innocent tumours, as their general aspects and histories do from the malignant ones.

Now, respecting the histories of fibro-plastic tumours, the cases hitherto observed are perhaps too few and too various to justify many general conclusions. The chief facts are, that these tumours usually occur singly, and most commonly in youth, or before old age, that they generally grow slowly and without pain, and that they occur without any known cause, such as injury or hereditary disposition. I do not know any degenerations to which they may be prone, and their permanently cellular forms show them to be less apt for development than for growth.

They have not usually any character of malignancy. Lebert’s* opinion is very

* L. c. Unfortunately M. Lebert has rarely been able to extend his cases beyond the time of the recovery from the operation. Among his cases, No. 6 in the “*Physiologie Pathologique*,” T. ii. p. 138, is the only one of certain fibro-plastic tumour in which the patient was observed long after its removal: in this case the patient remained well for at least six years.

decided on this point; and it is confirmed by some of the cases I have watched.* Thus, a lad, eighteen years old, was under Mr. Stanley's care, four years ago, with a tumour occupying the interior of the symphysis, and immediately adjacent parts, of his lower jaw-bone. It had been observed gradually increasing for eight months without pain, and in its growth had disparted the walls of the jaw, hollowing out a cavity for itself, and projecting into the mouth through one of the alveoli. Mr. Stanley removed the portion of the jaw, from the first left molar to the first right bicuspid tooth, and the tumour presented the greenish and greyish basis, blotched with crimson and various brownish tints, and the characters of firmness, succulency, and microscopic texture, which I have described, as most distinctive of the fibro-plastic tumours. It was the specimen from which some of the microscopic sketches were made, and might be considered typical. This patient is still in good health, with no appearance of return of the disease.

Mr. Lawrence lately had under care a woman, twenty-one years old, with a tumour in the alveolar part of the front of the upper jaw. This was of about twelve months duration. It was seated between the walls of the alveolar and adjacent portion of the upper jaw, projecting slightly into both the mouth and the cavity of the nose. After cutting away the front wall of the jaw, the tumour was cleared out from all the cavity in which it lay imbedded. It was in all microscopic characters like that last mentioned, and resembled it in general features, except in that it had in every part the dark ruddy colour of a strong heart. The operation was performed seven months ago, and there has been no reappearance of the disease, such as would probably have occurred even before this in the case of a malignant tumour, if an attempt had been made to remove it, without the bone in which it was growing.†

But I believe we must not yet accept the rule, exemplified by these and similar cases, as free from exceptions; for I have seen

* Some of the growths included under the name are difficult to remove entire, and some are so placed that the surgeon is often tempted to leave portions of them. So a fibro-plastic epulis or aural polypus may grow again after an operation, but this may be only because the removal was incomplete. When the whole disease is removed recurrence is certainly unusual in either of these diseases.

† Mr. Lawrence has, at this time, under treatment a young woman in whom both upper jaws have been the seats of fibro-plastic tumours. He has lately removed one of the tumours, with the greater part of the right upper jaw bone; the other tumour appears subsiding; and, whatever may be the issue of the case, the whole of its recent progress has been very unlike that of a malignant disease.

two cases of what, at present, I must believe to be the same form of tumour, but had a very different issue.

A woman, fifty years old, was under Mr. Stanley's care, in 1847, with an irregular, roundish, heavy tumour in her left breast, between two and three inches in diameter. It projected in the breast, and the skin over it was red and tense, and at one part seemed to point, as if with suppuration. Some axillary glands were enlarged, but not hardened.

This tumour had existed about nine months, had been the seat of occasional pain, and was increasing. It was considered to be hard cancer; but, on removal of the breast, was found to be a distinct growth, completely separable from the mammary gland, which was pressed aside by it. Its character was obscured by suppuration in many points of its substance; yet after a careful examination of it in the recent state, and a repeated examination of the notes and sketches that I made of its structure, I can only conclude that it was a fibro-plastic tumour suppurated.

Eighteen months after the removal of her breast, this patient returned to the hospital, with a large ulcerated tumour in the lower part of her left axilla, which had begun to form as a distinct tumour six months after the operation. This was like a large flat ulcerated cancer: it often bled freely. Her general health was deeply affected by it, and she died in two or three months after her readmission.

The malignant character manifested in this case was yet more decidedly marked in another. A man, fifty-three years old, of healthy appearance, was under Mr. Lawrence's care with an oval tumour, extending, under the mastoid muscle, from the angle of the jaw to the clavicle. Bloody serum oozed from it through three small apertures in the integuments. The anterior part of the tumour felt as if containing fluid; the posterior part felt solid, firm, and elastic. He had observed this tumour for ten months, having found one morning, when he awoke, a lump nearly as large as an egg, which regularly increased. In two months it had become very large: it was punctured, and about one-third of a pint of reddish serum was discharged from it. In the succeeding eight months it was tapped thirty-four times more, about the same quantity of similar fluid being each time evacuated. It was also six times injected with tincture of iodine, twice traversed with setons, and in various other ways severely treated. The only general result was, that it increased, and seemed to become, in proportion, more solid. When admitted under Mr. Lawrence, all the parts over the tumour were extremely tense and painful, and cerebral

disturbance appeared to be produced by its pressure on the great blood-vessels of the neck. It was freely cut into, and the surface which was exposed presented well-marked characters of the fibro-plastic tumours such as I have described. Some small portions that were removed enabled me to confirm this with the microscope. The fibro-plastic elongated, and the many-nucleated cells, were, to all appearance, decisive. The incision of the tumour produced temporary relief; but the tumour continued to grow, and death occurred nearly twelve months from its commencement. In examination after death, the solid portion of the tumour formed five-sixths of its bulk, the rest consisting of a suppurating cavity. The microscopic characters of the solid part were exactly like those of the portions removed during life, though the substance appeared firmer and whiter than before, and yielded, when scraped, a creamy fluid. Four small masses of similar substance were found in the lungs; and a similar material was diffused in one cervical gland.

Now, in both these cases, and especially in the last, the whole history of which seems full of anomalies, there were certainly such features of dissimilarity from the usual general characters of the fibro-plastic tumours, that, although the microscopic characters appeared identical, yet they are not enough to prove even the occasional malignancy of the disease: but they are enough to make us cautious—enough to induce us to study this disease very carefully, as one of those that may, in different conditions, or in different persons, pursue very different courses,—appearing in some innocent, in others malignant. The use of such terms as “semi-malignant,” “locally malignant,” “less malignant than cancer,” and the like, in relation to growths of this kind, involves subjects of singular interest in pathology, as well as in practical surgery; but at present it may be well to form no conclusive opinion upon them. I can scarcely doubt that certain tumours, presenting, in all apparent structure, the same characters, may, in different persons, appear “innocent” or “malignant:” but respecting the grounds of these differences, I can as yet scarcely offer a suggestion.* At present I would rather doubt than adopt any general conclusion on the questions herein involved.

Doubts such as I have just expressed

* Only, I think I have known cases making it probable, that the children of a cancerous parent may be the subjects of tumours which may be like innocent tumours (such as the mammary glandular) in their structure, but may resemble cancers in a peculiar rapidity of growth, a proneness to ulceration and hæmorrhage, and an aptness to return after removal.

exist, also, with peculiar force, in relation to the two groups of tumours to which the remainder of this lecture must be devoted.

For one group, the name of “RECURRING FIBROID TUMOURS” may, for the present, suffice: their chief characteristics being that their general aspect very closely resembles that of the common fibrous tumours, their microscopic structure is in many respects like that of the fibro-plastic tumours, and the most striking feature in their history is their proneness to return after removal.

A brief account of some cases of this tumour may best illustrate it. The first I saw was from a gentleman, sixty years old, under the care of Mr. Stanley. In 1846 a tumour was removed by Mr. Cockle from the upper and outer part of his leg. It lay close to the tibia, was as large as a filbert, and was considered fibrous. Some months afterwards, another tumour was found in the same place, and when as large as a walnut, was removed by Mr. Hamilton, of the London Hospital, who considered it “decidedly fibrous.” In October 1847, Mr. Stanley removed from the same place a third tumour; and this I examined minutely. It had the shape, and nearly the size, of a patella; and the note that I made of its general appearance was, that it was “very like those fibrous tumours which are whitest, most homogeneous, and least fasciculate and glistening;” and that “without the microscope I should certainly have called it a fibrous tumour.”

The microscopic examination, however, shewed peculiar structures. The tumour was composed almost entirely of very narrow, elongated, caudate, and oat-shaped nucleated cells, many of which had long and subdivided terminal processes. Their contents were dimly shaded; and in many instances the nuclei appeared to swell out the body of the cell, as in the most elongated granulation-cells, or fibro-plastic cells. With these cells were scattered free nuclei, and grumous or granular matter, such as might have been derived from disintegrated cells. Very little filamentous tissue was contained in any part of the tumour.

Now, in the extirpation of the third tumour, the parts around it were very freely removed, the periosteum was scraped from the tibia, and every assurance seemed to exist that the whole disease was cleared away. But in June, 1848, two small tumours appeared in the subcutaneous tissue, just below the seats of the former operations. These also were removed, and these had the same fibrous appearance, and the same minute texture, as the preceding. Some months only elapsed before in the same place another tumour grew; *i. e.* a sixth tumour. The patient despairing

of remedy by operations, allowed this to grow till last November, by which time it had acquired a diameter of between four and five inches, and protruded as a large soft fungous mass from the front of the leg. Two profuse hæmorrhages occurred from it, and made him earnestly beg that his limb might be removed to relieve him from the extreme misery of his disease. The amputation was performed, and he died in a few days.

The tumour removed with the leg appeared confused with thin skin over it. It rested below on the muscles of the leg, but was not mixed with them except at a scar from the former operations. The tumour was milk-white, soft, and brain-like, except where discoloured by effused blood, and in the exposed parts was soft, pulpy, and grumous. One would certainly, judging by its general aspect, have called this a brain-like medullary cancer; and yet it had essentially the same microscopic characters as the tumours I first examined from the same patient, only, the narrow, elongated, caudate cells were very generally filled with minute shining molecules, as if from fatty degeneration connected with the protrusion and partial sloughing of the mass. Unfortunately no examination of the body was made after death, and it could only be guessed, from the absence of emaciation, and of all other indication of general loss of health, that no similar disease existed in internal organs.

In another case of the same kind, I assisted Mr. Stanley, in May, 1848, in the removal of a tumour from the shoulder of a gentleman, 28 years old. It had been growing under the deltoid for six months, was loosely connected with the surrounding parts, and was about three inches in diameter. It had the general aspect of a common fibrous tumour; firm, tough, white, traversed with irregular bands. It was easily and completely removed, but was not examined with the microscope. The wound of the operation healed well; but, two months afterwards, a second tumour appeared under the cicatrix. This was removed with some of the adjacent muscles, and other tissues. It was like the first, only less tough, and more lobed, and elastic; but under the microscope, instead of appearing fibrous, it appeared composed almost entirely of elongated and caudate nucleated cells, very like those described in the last case, and mixed with free nuclei, and granular matter.

In March, 1849, a third tumour was removed from the same part, which had been noticed two months, and again presented the same character; it was indeed greyer, and less firm, and more shining and succulent on its cut surfaces, but the

differences to the naked eye were not great, and the microscopic structure was the very same as in the former instance.

In October, 1849, another tumour had formed, and after it had resisted various methods of treatment, Mr. Stanley removed this also, by a fourth operation, in December. It had again the same character.

In the course of 1850, a fifth tumour appeared in the same part, and when I saw the patient a few months ago, this remained growing slowly, but not in any way interfering with his general health. He was pursuing an active occupation, and, but for the tumour, might have been thought a healthy man.

Prof. Gluge* has given a good general account of the history of such tumours as these, as examples of the forms transitional to cancer. He names them "albuminous sarcoma;" a term one hears frequently used, without perhaps, any clear meaning, yet generally, I think, with the suspicion that the growths to which it is applied are not wholly innocent.† Among the cases which he cites, one coincides exactly with those I have detailed. A Major, 45 years old, fell from his horse, in 1843. Six or seven weeks afterwards, a tumour appeared over his scapula. It was removed, but after some months returned. Between 1843 and 1848, four such tumours were removed from the same part. In 1848, the patient was under the care of M. Scutin, who removed the fifth tumour, and Gluge's description of this, including the expression that in colour and consistence it was like the muscular tissue of the intestinal canal, leaves little doubt that it was like the less firm of the specimens that I have been describing. In the last of these five operations, and in one previously, the removal of the tumour was followed by free cauterization of the wound; yet the last account published by Professor Gluge, was that in April, 1849, a sixth tumour had appeared in the same part: and he has informed me by letter, that in 1850 the patient died.‡

It will be observed, that in all these cases, recurrence is the only feature in the history of the disease making it resemble the malignant growths. And a case by Dr. Douglas MacLagan, the most instructive of all that have been recorded, proves that this tendency to recurrence may at length cease. The case is related in the 48th volume of the Edinburgh Medical

* *Pathol. Histologie*, p. 49.

† What Müller (*On Cancer*, p. 19) refers to as examples of benignant albuminous sarcoma were probably examples of the fibro-plastic tumour.

‡ Gluge cites three other cases; but I am not quite sure that they were of this kind.

and Surgical Journal, and by Dr. Maelagan's extreme kindness I am enabled to illustrate it with finished drawings of the tumours removed in the successive operation.

A girl, 22 years old, had a tumour, of three years growth, on the left lumbar region about an inch from the spine. In 1832, it was about as large as a Jarganelle pear, firm, but elastic and moveable, and below it was a portion of indurated skin. The tumour and diseased skin were removed, and the former "possessed most of the characters of a simple fibrous tumour." After about twelve months the disease returned in the scar. Three little tumours formed, and these with the scar were removed freely, in February, 1834. "The extirpated mass bore a striking resemblance to that previously removed." Between twelve and eighteen months later a third growth appeared; which, after increasing for a year and a half, was removed. "It had the same elastic feel and fibrous appearance; and the semitransparent pinkish grey colour was the same as in the original tumour." After this operation no fresh growth ensued, and Dr. Maelagan informs me that the patient remains perfectly well.

Mr. Maelagan has added the account of another case in which the essential features were quite similar; and to these I might add others. One was described by Mr. Syme, at a meeting of the Edinburgh Medico-Chirurgical Society,* in which three similar tumours were in nine years removed from a patient 64 years old. Another, which I believe must be referred to this group, is accurately described and figured by Dr. Hughes Bennett.† But the references to these, and the accounts that I have given of other cases, may suffice to prove the existence of a group of tumours having these remarkable characters in common:—1st. A general resemblance to the fibrous tumours in their obvious characters; 2d. A microscopic texture resembling that of the fibro-plastic more than of any other tumour, yet differing in the absence of the many-nucleated cells; 3d. A tendency to local recurrence after removal, and, in the worst extremity, to protrusion and ulceration, like a malignant growth;‡ 4th. An absence of those

events which, in cases of ordinary malignant growths, would coincide with this local recurrence, such as cachexia, and the affection of distant parts, or of the lymphatics.

How may we interpret their singular proneness to recur? Two views may be taken of the facts.* The tumours may, from the first, be formed of a cluster or group, and then the removal of one of them only leaves the remainder to continue their growth; or, 2dly, the apparent recurrence may be a real one, such as we suppose occurs in the case of cancers; in which we presume that, in a first operation, every morbid structure already formed in a part is removed, and entirely new growths are produced in the same part.

The former view is supported by whatever of resemblance exists between these and fibrous tumours, whose proneness to multiplicity is remarkable; and by the fact that sometimes, after the removal of one of these, two, or a more numerous group, have appeared in the same part. Yet the objections to this view appear to me more weighty. If we suppose, in any case in which six or seven tumours have been removed in succession from the same part, in as many years, that all began to grow at or about the same time, the last of these ought, according to the rate of growth of the rest, to have come into view much sooner. If the second tumour were not discernible in the first operation, where, or of what size, was the sixth?—or why did it require six or more years to come to the same bulk as the supposed coeval second tumour acquired in one year? It may be added that some of these tumours appear to have recurred in the substance of a scar left after a former operation—in a tissue, therefore, which did not exist at the time of the previous operations. Nor must we overlook, in connection with this apparent aptness to recur, the fact that the later-formed of these tumours may assume certain characters of the thoroughly malignant growths which were not observed in the earlier. In one of the cases I have seen, the last tumour was, in general aspect, hardly to be distinguished from brain-like tumour,

* Monthly Journal of Medical Science, vol. ii. p. 194. The report states that Professor Bennett found the microscopic characters of this tumour similar to those of the fibro-plastic tumours of Lebert. Probably this refers to the elongated cells alone. I have not, in any of these tumours, found the large many-nucleated cells which occur in the fibro-plastic tumours.

† On Cancerous and Canceroid Growths, p. 87.

‡ Mr. Syme particularly mentions this as a character belonging to those which he has seen. It looks, indeed, very like a sign of malignant

disease; but it may be only another feature of general resemblance between these and the subcutaneous fibrous tumours mentioned in the earlier part of the lecture.

* Some would add a third, supposing that in all these cases portions of the tumour were left behind in the operations. But this is unreasonable. These tumours are not more difficult to remove wholly than many are which never thus recur, such as the fatty, fibro-cellular, and the like. Besides, in many of the cases I have cited, it is certain that the whole tumour was every time removed.

though, in microscopic characters; essentially like its predecessors.* In one of Professor Gluge's cases, the transitions to completely malignant characters appeared yet more sure. Mr. Syme also expresses a similar transition; describing, as the usual course of these cases, that, after one or two recurrences of the tumour, the next new productions present a degeneration of character, excite pain, proceed to fungous ulceration, and thus in the end prove fatal. So that, although there be cases in which this evil career has not been run, yet I think we may regard these tumours as approximating to characters of malignancy, not only in their proneness to recur after removal, but in their aptness to assume sometimes the more malignant features the more often they recur. Whatever be the truth concerning the supposed transformation of an innocent into a malignant morbid structure, I think it cannot be doubted that, in the cases of some recurring growths, the successively later growths acquire more and more of the characters of thoroughly malignant disease.*

The second group of tumours, which, while bearing an apparent relation to the fibrous tumours, yet exhibit features of malignant nature, are those to which, till their characters are more perfectly known, I would give the name of **MALIGNANT FIBROUS TUMOURS**. In both general and microscopic characters they exactly resemble, I believe, the ordinary fibrous tumours already described; but they differ from them in that they recur once or more after removal, and form not only in their first locality, but in internal parts remote from it.

The most remarkable instance of the kind that I have seen was in a poor widow who was under my care ten years ago. She was 47 years old, and had been crippled with acute rheumatism for ten years before she found a small moveable tumour in her right breast. This had increased slowly till seven weeks before I saw her, when, having struck it, it began to grow very rapidly, and became the seat and centre of severe pain. It increased to between two and three inches in diameter, was nearly spherical, very firm, tense, and painful,—even extremely painful. I supposed it to be a large hard cancer, and removed the whole breast.

I found the tumour completely sepa-

rable from the mammary gland, which was pushed aside by it, but was healthy: the cut surface could not, I think, have been distinguished from that of an ordinary fibrous tumour of the uterus, with undulating white bands, except in that part of it had a suffused purplish tinge.* The whole substance of the tumour had the same characters; and in microscopic examination, often and lately repeated, I could find nothing but tough, compact, well-formed, fibrous tissue, with imbedded elongated nuclei. On boiling, gelatine was freely yielded. In short, I believe it would be impossible to distinguish, by any means but the history, this tumour from a common unmixed fibrous tumour of the jaw or subcutaneous tissue.

Three months after the operation a tumour appeared under the scar. It grew very quickly, and felt just like the former tumour. After two months the thin scar began to ulcerate, and the integuments around sloughed; and shortly the whole of this tumour was separated by sloughing, and was removed entire. This also had and still retains every character of the common fibrous tumour.

After the separation of this second tumour, a huge cavity remained, with sloughing walls; then, as the sloughing cleared away, hard knots, like those of a cancerous ulcer, grew up from the walls, and the disease assumed all the characters of a vast and deep hard cancerous sore. In two months she died. I found the ulcer nearly a foot in diameter: its walls were formed of a thick nodulated layer of hard, whitish, vascular substance, like the firmest kinds of medullary cancer. Both lungs contained between twenty and thirty small masses of similar substance imbedded or infiltrated in their tissue;† and this substance I have recently again examined, and found to be a complete fibrous tissue, like that of the first tumour removed. I found no similar disease elsewhere.

All the characteristic features of malignant disease were thus superadded to the growth of a tumour which appeared to be, in every structural character, identical with the common innocent fibrous tumour. Nearly the same events were observed in the following case:—In 1835, a man was in St. Bartholomew's Hospital, under the care of Mr. Earle, with a large spheroidal tumour, lying by the base of his scapula, and extending beneath it. It was removed; and I remember that it was easily enucleated from the adjacent parts, and was

* Compare some of the cases next described; some also of those of recurring proliferous cysts in the breast; and a remarkable case, of which specimens are described in the Catalogue of the Museum of St. Bartholomew's, ser. 35, Nos. 28, 29.

* See museum of St. Bartholomew's, ser. 34 Nos. 24 and 25; and Museum Coll. Surg. No. 224.

† Mus. St. Bartholomew's, 14; 43, Mus. Coll. Surg.

called "albuminous sarcoma;" but it was not preserved. About a year afterwards he returned with a yet larger tumour in the same situation. Mr. Skey removed this, together with a large portion of the scapula, to both surfaces of which it was closely united. The wound was scarcely healed, when another tumour appeared, and increased rapidly. With this the patient died, and growths of similar substance, white, very firm, and nodulated, were found beneath that part of the pleura which corresponded with the growth on the exterior of the chest. I state these particulars from memory; but I have found, from repeated recent examinations, that the tumour removed by Mr. Skey is of fibrous texture, resembling the common fibrous tumours both in general and in microscopic characters, and, like them, yielding gelatine when boiled.* It is lobed, with partitions of fibro-cellular tissue, and its several lobes are intersected with obscure opaque white fibres: it is tough, compact, and heavy, and tears with an obscure fibrous grain. It is easily dissected for the microscope, tearing into fasciculi, and appears composed wholly of closely-placed and nearly parallel undulating filaments. A few shrivelled nuclei appear among the fibres, but no cells are distinguishable.

To these cases I may add, though it be an imperfect one, that of a woman from whose back Mr. Lawrence removed a large, well-marked fibrous tumour, which had grown nine months after one of the same appearance had been removed from the same part.† Before removal, this was judged by all who saw it to be malignant; but it presented a genuine fibrous structure, and could not, I think, be distinguished from an ordinary fibrous tumour.

Such are the cases which make me believe that tumours occur, resembling in all respects of structure and chemical composition the fibrous tumours of the uterus (excepting their muscular fibres), or of the bones or subcutaneous tissue, yet differing from these in that they pursue a course like that of cancers, recurring after removal, growing at the same time in internal organs, tending to sloughing or ulceration, and in these processes involving adjacent structures. I have related only cases in which the fibrous structure was proved by microscopic examination; but I have little doubt that others might be added from the cases of tumours of the jaws and other bones, believed, from their general appearance, to be fibrous, yet pursuing a malignant course. I will only add that these are not

such growths as those which Müller and others have named *Carcinoma fibrosum*, and which, I believe, are always infiltrations in the substance of the affected organs, including cancer-cells with their fibrous tissue, and having in this tissue such hardness, stiffness, and other peculiarities of structure, as make it easily distinguishable from the normal fibrous tissue and its imitation in the fibrous tumours.

SUDDEN DEATH FROM PROBABLE CHRONIC DISEASE OF THE HEART, COMBINED WITH OEDEMA OF THE LUNGS. REPORTED BY DR. BOWDITCH.

THE patient was a lady, forty years of age; active in mind and body; seven months advanced in pregnancy; formerly had had pulmonary difficulties; within the last year has had dyspnoea with palpitation. Some time since, after waltzing, had palpitation and hæmoptysis; quite lately, recurrence of hæmoptysis; quantity of blood expectorated about a teaspoonful. Both of these accesses followed bodily and mental excitement, having been waltzing on one occasion, and on another having visited friends in the city. The last and fatal attack was while in the city. Dr. B. was called to her, and found her at the house of one of her acquaintance, which she had with difficulty reached, having been seized with dyspnoea while walking. She was breathing very hurriedly, with great distress, and coughing occasionally; raised large quantities of watery fluid, quite drenching several napkins. She was in a sitting posture, scarcely able to speak—begging for air, with hands livid and cold, and pulse scarcely perceptible. Dr. B. directed the application of external irritants, heat to the extremities, and syrups, nitrous ether, &c., with a view to exciting the circulation and relieving the cough. Patient grew worse and more distressed. Dr. Ware, sen., saw her in half an hour after the attack, in consultation with Dr. Bowditch. During a temporary absence of Dr. B. the patient rose suddenly from the bed, in a paroxysm of dyspnoea, fell back, and died immediately. Dr. B. detected very fine crepitant râle in right back, throughout, during a very hasty examination; the condition of the patient not allowing anything more than the most trivial exploration. No post-mortem examination could be obtained. Dr. B. thinks there must have been chronic cardiac disease, and that this was conjoined with pulmonary oedema, which, suddenly occurring, had suffocated the patient.—*American Journal of the Medical Sciences*, April, 1851.

* It is in the Museum of St. Bartholomew's, Series xxxv., No. 51.

† Mus. St. Bartholomew's, Ser. xxxv., lii.

Original Communications.

ON

ABSCESSSES OF THE ANTERIOR ABDOMINAL WALL.

BY J. MANLEY, M.D.

Physician to the City Dispensary.

(Read before the *Abernethian Society*,
March 6th, 1851.)

[Concluded from page 144.]

THAT abscesses of the abdominal wall do fortunately seldom discharge their contents into the peritoneal cavity, is probably due both to the protective inflammatory thickening of the external surface of the peritoneum, and to the continual and equable pressure of the viscera. Of course, when effusion does take place, death from peritonitis is the ordinary consequence of it. I have, however, met with the record of a case in the June number of the *Arch. de Méd.* 1850, which is given as an instance of absorption of the pus after its discharge into the peritoneum, where it gave rise to all the symptoms of acute peritonitis, from which the patient happily recovered. It is one of several cases given in an elaborate paper on the subject of post-peritoneal abscess, by Dr. Bernutz. It is headed "Acute Inflammation of the Fascia Propria of the Umbilical Region, with Purulent Collection, and Migration of the Pus into the cavity of the Peritoneum—Peritonitis—Recovery." A lad of 17, of poor constitution, and who suffered frequently from colic and diarrhoea, after a debauch, especially of wine, was seized with rigors, vomiting, and abdominal pains, so severe that he shrieked under them. On admission into the hospital, the features were shrunk, the countenance bad, no appetite, much thirst, continual nausea, and frequent vomiting of green bile. The abdomen was *retracted*, hard, and extremely painful on the slightest pressure. Bowels not opened for four days; respiration hurried, arrested by the pain; micturition easy and frequent; skin dry; pulse small, 80—90. On the fifth day the patient experienced a violent pain situated about an inch to the right of the umbilicus: this

spot was very tender on pressure, and presented a slight tumefaction and doughy sensation, deep-seated, ill-defined, elastic, with an obscure and doubtful fluctuation. The integument over the tumour had its natural appearance, and could be made to glide over it. Fluctuation soon became distinct in the centre of the swelling. The patient was then seized with extreme pain, spreading from the umbilicus over the whole of the abdomen. The countenance was pinched (*grippée*); continual agitation; intense thirst; nausea, and almost continued vomiting of a very bitter bluish-green fluid. The abdomen became tense, tympanitic, and hard, and everywhere intolerant of pressure. The circumscribed swelling near the umbilicus was no longer distinct. By the aid of large applications of leeches, and an opium pill every hour, these symptoms were mitigated; and, the abdomen being less painful, a more perfect examination of the umbilical tumour could be made, when it was found that all sensation of fluctuation had entirely disappeared in it, and it was considerably flattened. As the pain decreased, and finally ceased, an empty circumscribed cavity could be felt, which had taken the place of the umbilical tumour, and its walls could be made to glide one upon the other.

About a fortnight after, the patient left the hospital, and was no more heard of.

The author from whom I have taken the case illustrative of the absorption of the pus after its effusion into the peritoneal cavity, gives also an instance in which the tumour did not progress beyond the stage of induration: it extended longitudinally from the umbilicus to within a finger's breadth of Poupart's ligament, and transversely from the linea alba to within an inch of the crista of the ileum. The absorption of this induration was slow, and was not completed when the patient expressed the wish to leave the hospital.

When the pus is discharged into the intestinal canal, the apertures of both abscess and bowel are necessarily encircled and secured by salutary adhesions. The perforation of the bowel, however, is here of much more rare occurrence than in the case of abscesses of the iliac and pelvic regions: still there are some examples extant in

which the pus was voided in large quantities per anum. Sometimes, indeed, the abscess, whilst it opens through the abdominal parietes, communicates at the same time with the bowel; producing, in this manner, a stercoraceous fistula. Dr. Bernutz, in his very instructive paper, alludes to an instance of this kind, recorded in the *Mémoires de Chirurgie* of Trécourt—a work I have not been able to obtain.

A case I had occasion to observe during the course of the past summer presented somewhat similar symptoms; but there was, upon the whole, too much obscurity attached to it to allow of forming any definite opinion as to its precise nature. I will, however, beg leave to introduce it here, as being in some measure connected with the subject of the paper. For the first part of its history I am indebted to my friend, Mr. A. Kingdon, through whose kindness I was also enabled to complete it.

James Lester, æt. 14, a healthy looking lad, a farm-servant, was admitted into Henry's ward, June 22nd, 1850, with copious suppuration from the umbilicus.

He attributes his present malady to a blow he received on the back (lower dorsal region) from a rolling pin, three years ago; it was severe, and gave him pain for a day or two, but then subsided. During last winter he says that he suffered pain in the back, an aching pain, increased by labour. Ten weeks ago he perceived a slight fulness above the umbilicus, accompanied with redness, but without pain; at this period also the pain left the back; and he has been free from it ever since.

Soon after the appearance of the swelling, matter was discharged through the navel, at first in small quantity, and of rather offensive odour; the quantity of the discharge has been increasing steadily up to the present time. A probe was introduced by a medical man at the expiration of a fortnight, and, by the boy's account, penetrated no further than an inch. On admission, however, a probe would pass almost by its own weight fully 3 inches along the fistulous opening, shewing the track of the canal to be exactly on the mesial line, extending upwards and inwards, and apparently entering the abdominal cavity, for the probe stood at an angle

of 45° with the long axis of the body when in the horizontal position.

The discharge is now (on admission) abundant, and has a strong odour, such as is given off from dirty bandages. The flow of pus is favoured by the vertical position, and is increased also by a deep inspiration. The abdomen is generally hard from muscular development, but it is in no part tender. There is no unusual condition of the parietes around the navel, save a crop of pustules from poulticing. The spines of the vertebræ are all regular, and no pain is experienced on percussion. The appetite has been good throughout, and the patient's health and strength had never failed. He sought admission solely on account of the inconvenience of the discharge.

Cotton-wool was ordered to be applied to the abdomen. He had meat diet.

July 11th.—I saw the patient with Mr. Kingdon. The suppuration is still abundant; the pus is thick, homogeneous, of a healthy laudable character: when the patient rises up in the sitting posture, it flows out in a stream over the parietes of the abdomen. On removal of the cotton dressing the odour emitted is that of a large suppurating surface, such as a stump, but by holding some of the pus close under the nose, it was found to have a very foetid odour, of an intestinal character, and similar to that given off when the abdomen is opened at a post-mortem. This circumstance, which had not hitherto been noticed, became evident upon removing the stopper of a small glass tube into which some of the pus had been received for the purpose of microscopical examination. Another important fact observed for the first time by us was the escape of bubbles of a gaseous fluid, with a gurgling sound accompanying the flow of pus. The boy, however, stated that he had yesterday remarked this for the first time. Under the microscope, the purulent fluid, examined a short time after its removal, presented the ordinary pus-globules and extremely fine molecules.

The patient has had no medicine since his admission: he was ordered half a pint of porter daily. There is a certain degree of emaciation, and the countenance is not expressive of the same robust health as was the case when he entered the hospital.

26th.—Since last report the patient

has spent the greater part of the day out of bed, so that the pus has escaped more freely; it has now no peculiarly foetid smell, and is not accompanied with the escape of a gaseous fluid; the patient says that it is decreasing in quantity. The general appearance is improving, although the pulse is weak. He is on generous diet, with meat and porter; takes also \mathfrak{mxx} . of the liq. cinchonæ ter die.

27th.—This morning he complains of much pain in the abdomen: he was seized in the night, without any assignable cause, with nausea and vomiting, followed by several diarrhœic stools, which have continued this morning. The belly is tense and painful, especially on pressure, or when the patient moves. The countenance is strongly expressive of abdominal pain, with a flush on the cheeks. Tongue slightly furred, red at tip; thirst; the vomiting has ceased; pulse 145—50, small; respiration almost entirely costal; urine free; motions were not seen, not having been kept. The discharge from the umbilicus is still copious, and escapes with a slight gurgling sound on the patient raising himself. Was ordered—*Hirudin. viij. umbilico, cat. aut fatus postea; Pil. Hyd. c. Cret. co. j. sext. hor. Haust. Arom. si opus sit.*

In the evening, the countenance although pale and blanched, was more tranquil, and less expressive of pain; he said that he had been relieved by the leeches; they had bled freely. The abdomen was evidently less tense; the bowels had acted twice only; the pulse was still small and frequent, it was with difficulty it could be counted.

28th.—No sleep; but no pain in abdomen; skin hot and dry; pulse 145 to 50; tongue irregularly patched with a white fur; bowels open twice; stools liquid.—To continue *Fatus et Pil.*

29th, 3 P.M.—The face is flushed; the skin hot but moist; pulse with more power; has had some beef-tea about one P.M.; he experiences no pain in the abdomen, neither on moving nor on taking a deep breath; no sickness, but slight nausea after the beef-tea. The abdomen is generally less tense, but the left hypochondrium appears fuller than the right; pressure upon the left side also produces a more copious flow of pus through the fistulous opening.

The discharge is extremely copious, with escape of large and numerous bub-

bles of gas; moreover it presented this morning for the first time an entirely new feature, in that it evidently from its appearance and smell contained intestinal and faecal fluids. The nurse on removing the dressing for the first time this morning, found it impregnated with matter that communicated to it a stain similar to that which would be produced by faeces; the smell was also characteristic. This we were also able to verify at our visit: no motion per anum since yesterday. The tongue presents irregular patches of a white fur, with some tendency to dry; he complains of thirst, and expresses a desire for beer, which is not allowed; had some refreshing sleep in the night.—The pill was discontinued.

31st.—There has been no passage of faeces per anum since 28th. The evacuation through the umbilicus is so abundant that it is with difficulty the patient can be kept clean; it stains the linen a yellowish brown colour, and is evidently and almost entirely faecal. Upon removing the cotton-wool, it bubbles forth, streaming down the surface of the abdomen. No abdominal pain on moving, on taking a deep inspiration, or when pressure is made. The abdomen is still somewhat rigid and tense, but mostly from muscular contraction. No sickness, but thirst; tongue clean, rather red at tip; pulse still weak and small, but much less rapid; urine reported high coloured; good sleep at night; countenance flushed, but probably from his having just taken some beef-tea; otherwise natural.

August 2nd.—The bowels not having acted in the natural way, was ordered a gruel injection, which was followed by two loose but otherwise natural stools, as reported by the nurse. The discharge through the umbilical fistula is again becoming simply purulent. Pulse 108; no pain; tongue clean.—Ordered an egg and beef-tea.

3rd, 12 P.M.—This morning the discharge has no longer the character it has presented the last four days, but it is again distinctly purulent, being a thick, cream-like, yellowish homogeneous pus, escaping abundantly on pressure above and a little to the left of the umbilicus; abdomen quite tolerant; the bowels have not acted since the injection.

5th.—Bowels open twice since last report without assistance. The umbi-

lical discharge is solely purulent, with no escape of gas-bubbles; no abdominal pain; sleeps well; appetite good.—Ordered mutton-chop.

8th.—The escape of gaseous fluids was again observed to day. Discharge thinner, and reported less abundant; the flow is still increased by pressure in the left hypochondrium, which is certainly more full and tense than the right. Bowels open; stools rather loose; pulse still frequent, above 100, compressible; a slight hectic flush; eats his chop, and takes his porter; but the tongue is still furred at root, and red on dorsum and at tip.

12th.—The discharge is considerably diminished in quantity, the dressing being removed only twice a day. The general state is improving; bowels act regularly; takes all his food with pleasure.

19th.—Continues to improve; still some discharge, simply purulent, but considerably diminished; bowels acting naturally, and the stools are reported to contain no pus.

The patient was removed from the hospital by his father on September 17th, 1850. He was then weak and sallow-looking; the pulse remained small and rapid (being rarely below 100 pulsations per minute). The appetite was fair, and the tongue clean.

The discharge through the umbilicus was at that time sero-purulent, not offensive in odour, nor discoloured; the quantity was comparatively small, and he could move about without inconvenience, the cotton-wool dressing being sufficient to keep his clothes dry. The quantity had not, however, at all diminished during the last fortnight of his residence in the hospital.

On the 18th February, 1851, Mr. Kingdon was informed that the patient remained much in the same condition, the discharge continuing, but that he had gained sufficient strength to enable him to assist his father in some of the lighter duties of the farm.

I am by no means prepared to give any definite opinion as to the situation of the abscess in the case I have just related, although the depth to which the probe penetrated, and the direction it took, together with the persistence of the fistula, might lead to the supposition that it was located within the cavity of the abdomen. These are circumstances, however, which are known to occur in

simple abscesses of the abdominal parietes.

Nevertheless, I am inclined to think that the pus was situated within the peritoneal cavity, and probably in some of its folds, as in the liver, or great omentum, or circumscribed by adhesions. I have not been able to meet with an instance of abdominal suppuration precisely similar to it, but in the *Mém. de l'Acad. de Chirurgie*, in a paper by Petit (*le fils*) on abscesses of the liver, cases are related of collections of pus situated and confined by adhesions between the concave surface of the liver, arch of the colon, and neighbouring parts, and in which the pus was voided into the bowel: in one instance, in which the malady was of short duration, and death took place on the 15th day, pus was voided per anum two days previous to the fatal termination, and upon inspection the abscess was found situated between the concave surface of the liver and the arch of the colon, which was perforated at one point. In another, the patient lived five years after the first evacuation of pus per anum, which continued up to the time of his death. At the post-mortem examination, a round opening, large enough to admit the finger, was found in the right portion of the arch of the colon: the margin of this opening, and the cavity of the abscess, were extremely hard; the peritoneum, the external surface of the gall-bladder, a portion of the omentum, and the margin of the concave surface of the liver, all adherent and confounded together, formed the walls of the cavity.

Is it not probable, or rather possible, that in the case before us the seat of the abscess was somewhat similar, and that the only difference consisted in the abscess opening both into the bowel and externally?

The peculiarly fetid odour of the pus of abscesses developed in the substance of the abdominal parietes externally to the peritoneum, and having no communication with the bowel, had already been remarked by Ledran and Delamotte; and, in our own time, a paper containing the relation of four cases in which it was present was published by Dance, in the *Arch. Gén. de Méd.*, for October, 1832. The pus in these cases had either the odour of assafoetida, of sulphuretted hydrogen, or of faecal matter. In three of them the rapid

cicatrization of the fistulous openings, none of which at any time discharged true faecal matter, was a sufficient proof that there existed no communication with the cavity of the bowel. In the fourth case, in which the discharge presented in the highest degree the faecal odour, direct proof of the non-existence of all lesion of the gut was obtained by a post-mortem examination, at which the most minute search could discover no perforation. A similar case is recorded in the third vol. of Prof. Velpeau's Clinical Lectures (p. 376): the pus from the tumour, which burst spontaneously, and was situated on the right side of the abdomen, had an exceedingly strong smell, quite similar to that of intestinal fluid. The result of this case proved that there had existed no internal lesion, and that the pus had collected in the substance of the abdominal parietes, for after some symptoms which led to fear purulent absorption, the patient recovered completely, and left the hospital quite cured.

As an explanation of the fact, Dance considers that it must be admitted that the faecal odour is transmitted by imbibition through the parietes of the intestine. Prof. Velpeau expresses a similar opinion. He has, moreover, remarked that the smell is not the same over every region of the abdomen in which these abscesses occur. Thus, for example, an abscess situated in the right iliac region presented a decidedly stercoraceous odour; while in another instance in which the collection was seated in the epigastric region, the pus had rather a sourish smell, similar to that of ill-digested food.

The causes which operate in the production of phlegmonous inflammation of the abdominal walls are numerous.

On the more apparent, including all kinds of external injuries, such as wounds, contusions, the presence of foreign bodies, &c., it is unnecessary to dwell.

The puerperal state is occasionally attended with the formation of purulent collections in the anterior wall of the abdomen, where, after bursting spontaneously, or being opened with the knife, they frequently remain fistulous during a longer or shorter period, and sometimes permanently.

A case of the kind was pointed out to me last autumn, by my friend Mr. Worship, of Riverhead. The patient, a young primiparous female, was seized

after labour with symptoms of abdominal inflammation, which were followed by the formation of an abscess in the hypogastric region: it burst a little below the umbilicus; and at the time when I saw the patient, several months after her confinement, the fistulous opening was still discharging freely.

In September last, whilst accidentally going through Queen's Ward, I took the following brief note of a case, which may perhaps be considered as an example of chronic abscess consequent on parturition:—

Jackson, æt. 22: admitted August 7th, 1850. Her first and only confinement occurred two years ago. She states that her labour was long, but natural and unaided: after it she had pain and swelling in the right groin, but these symptoms disappeared some time back: she has never been well since her confinement. About a week before admission a copious discharge of a thin whitish fluid took place through the umbilicus; this is now (Sept. 21st) thick and distinctly purulent, not extremely abundant, the poultices being changed twice a day. The patient says she suffered no acute pain a short time previous to the bursting of the abscess, nor was there any redness nor swelling around the umbilicus, but she was much relieved after the discharge. It was more than once ascertained that a probe passed its whole length down the fistulous track, in the direction of the uterus.

I had no opportunity of further watching this case.

Affections of the intestinal canal are considered by Dr. Bernutz, and apparently with good reason, to be a not unfrequent cause of phlegmonous inflammation of the fascia propria of the anterior wall of the abdomen; four cases given in this author's paper tend to illustrate this proposition. In one there was cancerous disease of the omentum and bowel; in three others protracted dyspepsia, and intestinal disturbance in the form of habitual colic and diarrhœa. In one of these the exciting cause appeared to be an overdose of a drastic purgative, and in another the ingestion of an excessive quantity of wine.

Tubercular deposit in the post-peritoneal areolar tissue, does, doubtless, also give rise to deep-seated suppuration of the anterior abdominal wall.

Such was probably the origin of the

disease in the case related by M. Brichteau, in which, it will not be forgotten, the patient was of a strumous habit.*

On the diagnosis of deep-seated abscesses of the abdomen I have nothing to offer as the result of personal observation, and the works of both surgical and medical writers afford but little assistance on the subject.

It is stated by Dance (Dict. de Méd.) that, notwithstanding the close resemblance of their symptoms in the incipient stage to those of inflammation of the subjacent organs, and more particularly of the peritoneum, nevertheless the pain, even at the onset, has something of a fixed and superficial character (*quelque chose de fixe et de superficiel*), that it is, as well as the tumour succeeding it, circumscribed and limited to one point, and that the tumour may be ascertained to be imbedded in the substance of the abdominal wall.

But the particulars of the individual cases I have met with do not bear out the statement of Dance, as regards the character of the pain in the earliest stage of the complaint, which appears to differ in nothing from that of acute peritonitis.

Dr. Bernutz has remarked, that at this period, the abdomen, far from being distended, is hard and retracted; a circumstance which might assist in distinguishing the case from one of peritonitis or enteritis.

Afterwards, when the tumour becomes more or less apparent, the difficulty attendant upon the diagnosis is considerably diminished; and at a still more advanced period, when a spontaneous or artificial opening has shown that the tumour was formed by a collection of pus, it is no longer a matter of practical interest to determine the precise nature of the case, as all we can do for its cure is to abandon it to nature, abstaining altogether from useless and unnecessary probing.

The therapeutical indications in these cases are few. In the incipient stage, and when the symptoms are similar to

those of acute inflammation of the abdomen, we should all instinctively, and without hesitation, resort to the usual antiphlogistic remedies.

Upon detection of pus forming a collection, the early but cautious cutting down upon the tumour with a view to its evacuation would be advisable. In the case of the opening, produced either by nature or by art, remaining fistulous, I do not know that it would be prudent to apply any but the mildest means to attempt the closure of it. As an instance of an ingenious and innocent mode of applying compression for the obliteration of the fistulous track, although available only in the fair sex, the following from Boyer stands probably unique:—

A female, aged 22, was affected after her first confinement, which was long and laborious, with inflammatory symptoms in the hypogastric region, followed by the formation of an enormous abscess, which burst just below the umbilicus: the opening remained fistulous, and Boyer made a counter opening just above the symphysis pubis, after ascertaining that a probe passed from the upper opening down to this spot. The upper opening soon healed, but the lower one in its turn remained fistulous. Now Boyer, seeing that to obtain the adhesion of the walls of the fistula it would be necessary to keep them in contact by a permanent compression, was struck with the idea that this might be accomplished by the pressure of the gravid uterus upon the walls of the abdomen at the period of gestation, when it rises above the brim of the pelvis; and agreeably to this view he recommended a second pregnancy. The patient had some difficulty in understanding that a second pregnancy was to be the means of curing a complaint which had been brought about by a first one; but wisely yielding to the advice of her surgeon, again became *enceinte*: before the expiration of the sixth month of her pregnancy the fistula was completely and solidly cicatrized.

* I have now (June 28th, 1851) grounds for believing that the formation of the abscess in the case of the child Collins was due to a similar cause, as, since the communication was made to the Abernethian Society, the patient has again come under my observation, and this time, in addition to loss of flesh and strength, with local symptoms of pulmonary phthisis. On examining the abdomen, now nearly a year since the ultimate closure of the fistula, no trace of disease is discovered.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 24th July, 1851:—Thomas J. W. Marsh, London—W. Prater, Exeter—Geo. Wise Mackenzie, Maidstone—Henry Gregory King, Kingston.

ON THE
PHYSICAL DIAGNOSIS OF DISEASES
OF THE ABDOMEN.

BY EDWARD BALLARD, M.D.

Late Physician to the St. Pancras Royal General
Dispensary, &c.

[Continued from page 107.]

MENSURATION.—*Mode of measuring—results of measurement in health—while at rest—measurement of extent of movements—measurement in disease.*

PALPATION.—*Mode of palpation—results of palpation in health—Physical signs derived from palpation in disease—Examination by the vagina—Examination by the rectum—by the uterine sound.*

MEASUREMENT renders accurate the results of simple inspection, and, like it, may be applied to the chest and abdomen, either to ascertain their dimensions when at rest, or to determine the extent of their movements.

Mode of Measuring.

The precautions to be observed as to the patient are the same as for inspection. The most convenient instrument for ordinary use is an inelastic tape, marked with eighths of an inch, but for certain purposes the "chest measurer" of Dr. Sibson* will be found indispensable. In making comparative daily measurements, great care should be taken that the posture of the patient be as nearly as possible the same, and that the tape or chest measurer be applied over the same parts of the surface. For the latter, the eye and memory will scarcely suffice, and it is consequently advisable to stain the spot or line of the first day's measurement with the nitrate of silver or iodine. Measurement may be either *circular*, for the determination of the girth of the trunk at different parts, and the relative size of the two sides, or it may be applied to discover the distance between certain fixed points; as the lower end of the sternum, the pubic symphysis, the anterior spinous processes of the iliac bones or the umbilicus. In making circular measure-

ment, the patient should hold his breath at the end of an ordinary expiration; the commencement of the measuring-tape should be placed exactly at the middle line anteriorly, and from this point it should be carried evenly and horizontally round the trunk, passing over the right side first, till it arrives again at the middle line anteriorly. To compare the two sides of the trunk, that of the right may be ascertained by noting the spot at which the tape crosses the middle line behind, and that of the left by subtracting the size of the right side from the entire girth. For this purpose, however, the patient must either sit or stand, and two persons must be engaged in the measurement; one to arrange the extremities of the tape in front, and the other to observe where it crosses the spine behind. When a patient is in bed, and cannot sit up or stand for the measurement to be made, this method cannot be employed. Two tapes may then be joined together at their commencement and at this spot, where they are to be applied to the spine they may be adapted to it either by padding, or by affixing to the junction a little bent plate of brass: by either plan the apposition of the commencement of the scale of each tape to the spinous processes is secured. Each tape being then brought round to the middle line in front, indicates the circumference of its own side.

The measurement of the extent of the respiratory movement of any part of the thoracic or abdominal wall can only be ascertained by the use of the "chest measurer." It may be applied either in the recumbent, sitting, or standing posture, the flat plate being laid upon the back, and the rack and dial brought in contact with the spot whose amount of motion is to be tested.

To determine the general enlargement of each semicircumference with the inspiratory act, a small addition has been made to the double tape above described, by Mr. H. Thompson. It consists in a piece of brass, with a spring fixed on the back part of it, and between these the tape of one side is allowed to slip during the inspiratory act, the apparatus being firmly held so as to correspond with the anterior median line, while the other tape is permitted to slide through the fingers; the expansion of both sides is then ascertained at once.

Results of Measurement in Health.

1. The horizontal lines at which it is most desirable to take the girth of the trunk are that which crosses the *nipples* on the fourth rib, that which commences and ends at the base of the ensiform cartilage, or *lower extremity of the sternum*,—that which crosses the *margin of the lower ribs*,—and that which begins and ends at the *navel*. In cases where the abdomen is distended by disease, an additional line of measurement is made at its most prominent part. The girth of these several parts presents in health pretty constant relations; their absolute girth varies exceedingly. In the robust male, the measurement around the nipples is the largest, that around the lower extremity of the sternum about $1\frac{1}{2}$ inches to 2 inches less, that which embraces the abdomen at the lower margin of the ribs is about $4\frac{1}{2}$ inches less than the last, while one between the lower extremity of the sternum and the lower margin of the ribs will be intermediate according to the part of the liver bulge at which it is taken. The measurement at the navel is a little larger than that at the lower margin of the ribs. The comparative measurement of the two sides, when the stomach is not distended with food, gives generally the following results. Measuring over the nipples and bottom of the sternum, the right side is found to exceed the left in size by from $\frac{1}{4}$ inch to 1 inch, the greater difference being commonly found in those persons whose employment leads them to make the greatest use of the right arm. Half an inch may be considered the average at the bottom of the sternum, and something less across the nipples. Unless the liver descends low, the measurement of the two sides at the lower margin of the ribs will be equal, or nearly so, and, in the absence of disturbing causes, the same may be said of that across the navel. I have said that the circular measurement should be made with the arms lying parallel to the trunk, for when, as is often done, they are raised at right angles with it, several alterations take place both in the actual and relative measurements of the two sides.

The circular measurements are influenced by age, sex, and habits. In proportion to the youth of children, the greater is the similarity of size of

the two sides, and the girth of the trunk at the lower margin of the ribs is greater, until, in the infant, it is larger than that corresponding with the bottom of the sternum. In females whose thoracic walls have been altered in form by pressure, the relation of the several girths of the trunk are altered also; the smallest girth is in these at the seat of constriction, commonly at what should be the bulge of the liver, and from this point it is found increasing downwards towards the margin of the ribs. Apart from this constriction, however, the girth of the chest appears naturally less in proportion to that of the abdomen than obtains in the other sex. In persons whose occupations are sedentary, the girth round the nipples is proportionally less than in the more active labourer, and that around the lower margin of the ribs and abdomen proportionally larger. The navel is nearer to the pubic symphysis than to the bottom of the sternum, the proportion of its distance from each being about that of $6\frac{1}{2}$ from the former, to 8 from the latter.

2. Dr. Sibson has found as the result of his researches upon this subject, that “in the healthy robust male, the *movement* of the sternum and of the thoracic and intermediate ribs, from the first to the seventh, is from .02 to .07 in. during an ordinary inspiration, and from .5 or .7 in. to 2 in., (the amount varying with the extreme breathing capacity) during a deep inspiration. The ordinary abdominal (diaphragmatic) movement, is from .25 to .3 in.; the extreme .6 to 1.6 in. The ordinary lateral expansion of the diaphragmatic or lower ribs is greater, and the extreme expansion is usually less, than the respective ordinary and extreme expansion of the thoracic or upper ribs. The expansion of the second ribs is usually alike on both sides; below, all the inspiratory movements, especially those over the heart, are usually somewhat less on the left side than on the right, both during ordinary and extreme inspiration.” In females the use of stays restrains the abdominal, and exaggerates the thoracic movements. “In infants the thoracic movement is considerable, being from .02 to .12 in., while the abdominal is from .06 to .15 in.”

Measurement in Disease.

The results of both static and dynamic measurement in disease afford

valuable information as to the condition of internal parts. In estimating this value, however, it must be kept in mind, that, in the aged, the rigidity of the thoracic walls presents an impediment to the changes of measurement which disease would produce in younger subjects, and, on the other hand, that chronic enlargement beneath them may produce increase of measurement and bulging on inspection, which will remain after the cause of fulness has ceased to exist. This is not uncommonly noticed in the cartilages of the ribs overlying the stomach. The *signs of disease* which measurement affords, are, 1st., *changes both actual and relative of the several girths of the trunk.* 2nd., *changes in the relative size of the two sides.* 3rd., *changes in the distance of the navel from the lower end of the sternum and pubic symphysis.* The *dynamic signs* derived from measurement have reference to *changes in the amount of movement of the several parts of the abdomen and chest,* during the respiratory acts. The Spirometer may be used to determine the extent to which the breathing capacity of the chest is reduced by abdominal as well as by thoracic disease. In using this instrument, however, it must be kept in mind that the results it furnishes are no evidence of absolute encroachment upon the thoracic cavity by abdominal organs, any more than they are of the absolute existence and nature of organic disease of the lungs, since the various affections of both cavities and their walls which lessen the thoracic expansion on account of pain, &c., necessarily influence its indications.

PALPATION.

By the application of the hand to the surface of the abdomen, we receive information not only respecting the abdominal wall, but also respecting all parts which can be felt through it. It informs us of position, size, form, weight, consistence, and elasticity, of spontaneous movement or mobility, and of the presence of any vibrations which may reach the surface. The clearness or obscurity with which internal parts may be felt through the wall, will depend in great measure on its thickness, all other things being favourable to the examination. Hence it occurs in disease, that parts at first not readily felt, or difficult of definition, become more evident as

emaciation proceeds or serous infiltration disappears. The obscurity from the latter cause may sometimes be obviated by placing the patient in such a position for some time previous to the examination, as will favour gravitation of the fluid away from the part.

Mode of palpation.

It need scarcely be said, that for accurate palpation the hand should be applied directly to the surface. Care, however, should be taken that it is not cold, or the contraction of the muscles which its contact would occasion would interfere with the examination. The parts to which it may be applied are the soft wall of the abdomen, the space between the lower ribs, and the canals of the vagina or rectum. The position of the patient usually selected is the supine, but often it is advisable and even necessary to examine in the erect posture, or to change it in various ways, as from that on the back to either side, or to place the patient on the hands and knees. In determining the condition of the soft wall of the abdomen, the hand may be passed smoothly over its surface, by which means irregularities from new developments in it may become perceptible; but for deeper parts more or less pressure is requisite, which, according to the object we wish to arrive at, must be variously modified. In most cases, however, the abdominal muscles must be relaxed as far as possible, by raising the shoulders, and flexing the thighs upon the belly. This should not be left to be effected by the voluntary efforts of the patient, but both the body and the thighs should be placed in position by assistants, and retained so by the aid of pillows, &c. When this precaution has been neglected, the muscular portions of the abdominal wall have often been confounded with solid bodies within the cavity. Where parts are tender to the touch, palpation should be very gently performed, not only on account of the pain which it gives to the patient, but because the very act itself may be the means of injuring the continuity of tissue, and of producing such serious mischief as perforation of the peritoneum, or rupture of abscess, &c., into its cavity. For the same reason (the risk of mischief) it is well not to repeat this mode of examination unnecessarily. Occasionally the entire hand must be used,

but mostly it is sufficient to employ the palmar surface of the last joint of the fingers, which should be first smoothly applied to the surface, and then depressed perpendicularly to it. The tips of the fingers are apt to give pain, but sometimes we cannot avoid using them.

Where there is great tenderness of the abdomen and mucous passages, Dr. Simpson recommends that the patient should be placed under the anæsthetic influence of chloroform previous to examination. I need scarcely observe how cautious we should be in following this practice, although no doubt there are cases in which it is the only means by which the full benefit of palpation and percussion for purposes of diagnosis can be obtained. Anæsthesia, however, we must recollect, may remove the only safeguard the patient possesses against injury from our manipulations, not only because it deprives us of all warning of our approaching tissues on the verge of disorganization, but also because it may tempt us to employ more roughness in our examination than we should do were the patient sensible of pain. In those cases where the tenderness arises chiefly or entirely from nervous causes, hysteria or spinal irritation, and the condition of the thoracic organs does not interfere with its use, less evil is to be feared in this respect than where the tenderness is the pure result of local disease; in this latter case it appears to me doubtful whether it should be used at all. An objection to anæsthesia for the purpose of making a vaginal or rectal exploration, unless with the full consent of the patient after explanation, and in the presence of a friend, naturally occurs to the mind.

Result of Palpation in Health.

Many of the points which inspection displays in the natural or morbid conformation of the trunk are also capable of being ascertained by passing the hand over the surface; such as its general form and size, and the most remarkable of the elevations or bulgings which it presents. Palpation, then, becomes not only confirmatory of its indications, but, where the patient cannot or will not be exposed to inspection, may to some extent replace it. The wall of the abdomen readily yields to the pressure of the hand, but yet offers such an amount of resistance as gives the idea of a certain thickness. It

is elastic also, readily, and with a certain degree of force, following the hand as pressure is withdrawn. The resistance opposed to the hand is rather greater a little way below the xiphoid cartilage, in the angle of the epigastrium, than elsewhere, its extent varying with the extent of surface over which the *liver* is in contact with that part of the parietes. With this exception nothing can be felt of the liver, unless the fingers can be made to reach behind the margin of the ribs. In thin subjects with a lax abdominal wall this can sometimes be accomplished, the tips of the fingers coming in contact with the margin of the organ if sufficiently low. It is only under similar circumstances that the lower extremity of the *spleen* can occasionally be felt in health. The *kidneys* are, in consequence of their depth, and of the various organs which intervene between them and the anterior parietes, difficult to feel in their healthy state. The muscles of the abdomen must be efficiently relaxed, and strong pressure be made in their direction; the overlying intestines being pressed aside as much as practicable by a circular movement of the hands during the process of palpation, which may be assisted, if much difficulty is perceived in arriving at them, by counter-pressure from behind. Their anatomical position must be kept in memory, as it is not uncommon to see persons unskilled in searching for them groping with their hands at far too low a level. They are, if at all, to be discovered by the side of the vertebral column, on the level of the lowest ribs, and then it is only their lowest part that can be felt. In thin persons pressure to the left and a little above the umbilicus will often enable us to feel the pulsations of the aorta, especially where the lumbar curve of the vertebral column is great. The bodies of the vertebræ may be occasionally felt in such subjects. In females who have been much compressed with stays, the organs are often so greatly displaced, that the liver, spleen, and kidneys, can be felt without difficulty in the new position into which they have been forced.

Physical Signs derived from Palpation in Disease.

A. Signs having reference to the abdominal wall.

1. Increased resistance and apparent thickening.

2. *Diminished resistance and apparent thinning.*

3. *Increased tension and elastic force of parietes.*

4. *Diminished tension and elastic force of parietes.*

These four signs perceived by gentle pressure with the palmar surface of the fingers, occur as indications either of disease in the parietes themselves, or in connection with altered physical conditions of the peritoneum and organs of the abdomen. There must be a distinction, however, drawn between these signs of resistance and tension arising from physical causes, and those which are due to muscular action, either originating in fear, or as the involuntary result of painful disease in subjacent organs. The peculiar, hard, board-like feel arising from this source, and its evident limitation in some cases to the course of certain muscles, or to one side, as well as its subsidence on steady and gently applied pressure, especially where the attention is withdrawn to other matters, readily distinguishes it.

5. *Tumours in the parietes* are to be felt by sliding the hand with gentle pressure over the surface of the abdomen.

B. *Signs referable to internal organs and parts.*

1. *Perception of organs beyond their natural limits.*—Palpation can only give this information respecting those organs whose structure fits them for resisting the pressure of the hand, and whose forms and connection are such as to be distinctive. In seeking the definition of the limit of any organ, it is well to commence our palpation at a part to which it is unlikely to have extended, and to approach by degrees its supposed limits. By this mode the spot at which resistance commences is readily perceived, often much more readily than its point of termination, by examining in the other direction. In some cases, where the wall is lax and atonic, as after the operation of tapping, the fingers can be made to embrace more or less any solid body within reach, so as to determine its size and boundaries with the greatest accuracy. When there is much fluid accumulated in the peritoneum, the ordinary mode of feeling for internal organs cannot be adopted, and in such cases on applying the fingers to the surface, and then suddenly push-

ing inwards with them, solid organs may often be felt to strike against them. The possibility of doing this is in itself a sign of the presence of liquid between the wall and the organ felt. The extent, and even other points respecting the liver, spleen, and abnormal tumours, may often be determined in this manner. Organs are perceived by the hand beyond their ordinary limits, both when they are simply displaced, and when they are actually enlarged.

2. *Alteration of form* is perceived by the hand made to pass over the surface of an organ and around its boundaries. In the case of the liver the position and depth of the interlobular notch and the thickness of its edge are to be observed.

3. *Irregularity of surface* may occur without alteration of general form; careful palpation of the margin of an organ, or causing the abdominal wall to slide in a circular manner over its surface, will enable the hand to perceive minute amounts of unevenness.

4. *Consistence.*—Some idea of the degree of *hardness* or *softness* of felt organs may be obtained by the sense of resistance or yielding which palpation imparts to the fingers.

5. *Immobility* is a sign which pertains both to the abdominal parietes and to felt organs in certain pathological conditions. In the former case, though the skin and looser portions of the wall may be moved by the hand, yet the deeper portions appear fixed, and cannot be made to slide over the internal structures. In testing the mobility of solid organs, we may either employ gravitation, by altering the posture of the patient, or endeavour to move the organ with the hands.

6. *Increased weight* of solid organs may be appreciated by the amount of force required to move them, or to sustain or raise them, when, by altering the posture of the patient, they are made to rest in some degree upon the hand.

7. *Tumour.*—Palpation of the abdomen may make evident the presence of more or less circumscribed *resistance* in unnatural situations. This, indeed, is a sign which belongs both to displaced and enlarged solid organs, but it is convenient to consider it also apart from these, as a sign of disease in parts which do not offer a sensation of solidity on palpation of the abdomen in health: such are the hollow organs and the peritoneum. The examination of a tu-

mour should include every point which is to be determined in regard to natural solid organs,—its locality, size, form, superficial irregularity, consistence, mobility, and weight, and in addition to these its depth from the surface, and apparent connexions.

8. *Sense of distension*.—The hand being placed on the abdomen, an elevation of the spot may be sometimes perceived to occur, that portion of the wall being raised by the distension of a sub-jacent intestine with gas.

9. *Sense of subsidence* occurs as the converse of the former sign, but also may appear on making pressure over certain tumours.

10. *Gaseous vibration* is a term which may be applied to sensations which are imparted to the hand when, either during the presence of borborygmi, or on pressure, gas is made to pass through an inefficient space from one portion of intestine to another. The sensation may be one of a croaking character, or it may be bubbling or *gurgling*: in most cases these sensations are accompanied by sound audible at a short distance from the patient. The gurgling vibration indicates the conjoined presence of liquid matters.

11. *Sensation of friction*.—This is referable to a want of smoothness in the opposed surfaces of the peritoneum. It has been variously described as “a soft, creeping, or gentle vibration under the hand,” as like the sensation given to the “finger rubbed over a pane of glass.” The more intense degrees have been likened to “creaking,” “crepitus,” and “grating.” It is usually perceived during the movements impressed on the abdominal organs, by the action of the diaphragm in respiration sometimes being limited to the inspiratory act. In other cases the pressure of the hand is necessary to elicit it. It rarely arises independently of one of these sources of motion, but has been observed in connection with the peristaltic movements of the intestines alone. It then corresponds in character with these motions; being “continuous,” “creeping,” and “rustling.” The phenomenon is more marked, and less dependent on artificial pressure, where it occurs over the seat of solid organs or abnormal growths and thickenings, than where it is due simply to a roughened state of the peritoneum of otherwise healthy intestines. The friction which accom-

panies the peristaltic movements must not be confounded with the sensation arising from the passage of gas.

12. *Grating* is only perceived on motion being imparted by the hand. The sensation is similar to that of pressing together a number of small hard bodies in the hand, and it is always a sign of a similar accumulation within the abdomen. It is mostly discovered in the regions of the gall-bladder and kidneys; sometimes, however, it is referable to accumulation of hard bodies in the intestinal tube.

13. *Fluctuation*.—To perceive general abdominal fluctuation, one hand should be laid evenly upon the surface, while an opposite part is sharply tapped with the fingers of the other. The sensation given is that which would be naturally referred to the impulsion of a series of waves upon the hand. The fineness of the undulations will depend on the tenseness of the wall, and in some degree upon the thin character of the contained fluid. It is difficult to perceive fluctuation where the wall is loaded with fat, where the peritoneum is greatly thickened, or there is much infiltration beneath the integument. In the latter case acupuncture will often reduce the thickness of the wall, so as to allow of this sign being ascertained. An infiltrated state of the wall itself gives rise to a kind of fluctuation, especially when light manipulation is employed and the wall struck obliquely. The interval of time which elapses between the stroke and the sensation of fluctuation varies with the thickness of the fluid and the flaccidity of the wall, the latter being modified not only by the quantity of liquid present, but also by the amount of gaseous intestinal distension. Where the quantity of fluid is small, it has been recommended to apply the two hands to the surface to be examined, separating them only by an interval of two or three inches, in such a manner that the two under edges shall be parallel, and confront one another by their external edges: if then light blows be given to the wall by the right index, the undulatory movement will be perceived by the left. Valuable information is gained by observing the variation of this sign as to position and clearness, with alterations in the posture of the patient. For the most part it results from the presence of fluid beneath the abdominal walls, but not con-

stantly. Gelatinous matter, either free within the cavity of the abdomen, or encysted, imparts a sensation not distinguishable from fine fluctuation; and a similar sensation has been more than once imparted to the hand by an enlarged spleen. A little care, however, readily distinguishes this last phenomenon from the fluctuation arising from the presence of liquid. When collections of matter occur within the abdomen, and point like an ordinary abscess at the surface, fluctuation is to be detected by the alternate movement of the fingers adopted by the surgeon when he suspects its existence in other of the soft parts of the body.

14. *Pulsation*.—The pulsatory movement of the large vessels of the abdomen is mostly lost to the touch, as well as to the eye, before reaching the surface. The pulsation of the aorta, however, may be felt on deep pressure over its course, especially in persons of spare conformation or emaciated by disease. In some cases of disease it is very manifest, extending sometimes even to the femoral arteries, which then beat with increased force. Its seat, extent, direction, whether merely elevating the hand, or presenting lateral expansion also, its connection with felt tumour, and its degree of permanence, are all to be observed in any endeavour to estimate its cause and semeiological value. A pulsatory sensation at the angle of the epigastrium often occurs in connection with thoracic or cardiac disease.

15. *Thrill* mostly arises in connection with the vascular system; it may then be observed as an accompaniment of a felt pulsation, or independently of it. It may be intermittent, corresponding then with the arterial pulse, or continuous. It is not a necessary indication of disease in the vessels; nor, where this exists, is it a measure of its amount, since a moderate degree of pressure will elicit it in a patient with healthy arteries whose blood is poor (*spanæmia*); and this same condition of the circulating fluid will exaggerate its intensity when it arises in connection with disease of the vessels. A thrill may arise, however, independently either of a morbid state of the blood or vessels, as shown by Dr. Swett from friction of the heart upon a tuberculated liver.

16. *Altered palpable signs having reference to the organs of the chest*.—Two of these are of especial value. 1. *An al-*

tered seat of impulse of the apex of the heart to a level considerably higher and more to the left than natural. This arises from the displacement of the organ by some of those diseases of the abdomen which elevate the left arch of the diaphragm by the pressure which they exercise upon it from below. 2. *A diminution of the tactile vocal vibration*, which, in certain diseases which compress the thoracic viscera, is not observed to extend as low as is customary in health.

The *signs of pregnancy* afforded by palpation will be most conveniently described under that subject.

It has been remarked that certain organs which in advanced disease exhibit signs which are ascertainable by physical examination of the abdomen, occupy in health a position in the pelvis which prevents their being explored through the soft parietes of the belly. The alteration of their position which renders this sort of examination practicable has the further effect of removing those diseases which occasion it from the category of pelvic into that of abdominal maladies,—so far, at least, as to render them capable of confusion with those affections which arise as morbid states of truly abdominal organs; it consequently becomes sometimes necessary in their diagnosis to make use of palpation through the lower aperture of the pelvis, by the introduction of the fingers into the canals of the rectum and vagina. It will therefore be necessary to make a few brief observations on these modes of examination.

Examination by the vagina.—For most purposes the best position for the patient is the supine, the physician standing on the right side for the facility of using his right hand in the examination. The index finger is mostly sufficient, but sometimes both that and the middle finger are requisite: they should be well greased, and slowly and carefully introduced. The fingers being introduced, the elbow should be depressed, so as to allow of their being carried in the direction of the axis of the pelvis. Another mode of insuring the correct direction is to introduce them by passing the hand first beneath the raised right thigh of the patient. The obstetric position upon the left side, adopted by some practitioners from motives of delicacy, is open to many prac-

tical objections, the most serious of which is that the back of the finger comes in contact with the anterior part of the vaginal wall, and there is so much difficulty in turning it, that signs of disease on that side may easily escape detection. It is often desirable, however, to make the examination of the patient while standing, as for the detection of "ballotement" in pregnancy, or where the weight of felt parts or organs has to be estimated. Pressure with the unoccupied hand may be advantageously employed sometimes above the pubes, either to bring the parts more readily under examination by depressing them in the pelvis, or to estimate their size, connections, &c., by grasping them between the two hands, the one below and the other above. This often requires, however, the depression of the hand far down behind the pubes, which, although readily effected after labour, or in females with lax abdominal walls, requires in many that the shoulders should be raised considerably, and the thighs well flexed upon the trunk. The rectum and bladder should be evacuated prior to the examination, so as to avoid the fallacies which might arise from their distension, and to admit the more ready employment of pressure in various desired directions. *In the normal state*, the attachment of the vagina into the neck of the uterus is readily reached. The cervix uteri is perceived as a somewhat conical projection beyond the line of attachment, of about $\frac{1}{4}$ to $\frac{1}{2}$ an inch in length, firm, and presenting at its apex a transverse depression bounded by a firm lip anteriorly and posteriorly. The vaginal wall allows of pressure being exerted in all directions without resistance by the finger within it, whether laterally by the sides of the uterus, or upwards from the cul-de-sac in front or behind its attachment to the cervix. The cervix is capable of being moved, and with it the entire womb, by the pressure of the fingers.

In the performance of *vaginal examination in disease* the same objects should be had in view as in palpation of the exterior of the abdomen,—viz., to ascertain the position, extent, form, weight, consistence, and mobility of all organs and morbid structures which the finger is capable of reaching, as well as alterations in the direction and dimensions of the vagina itself, and the existence of

projections or bulging into its canal. Once the finger is in the vagina, the examination should be proceeded with leisurely, so that no imperfection in it shall render necessary its repetition on a future day: a hurried exploration is rarely productive of any useful result.

Examination by the rectum may be made in the same manner as that by the vagina, or the patient may be placed upon the side. The finger should be well lubricated, and slowly introduced through the sphincter. This may be relaxed by requesting the patient to bear down, and the tip of the finger being then applied to the anus it can readily be made to slip up during the subsequent contraction. By this mode of exploration the organs and growths at the posterior side of the pelvis can be felt, and in some subjects the ovaries: this, however, is rather the exception than the rule when the latter organs are in their normal position and of their normal bulk. The finger can, of course, feel any resistance within its reach, arising from constriction of the canal of the rectum. In some cases, useful information is gained by the simultaneous use of the finger and thumb, the former in the rectum and the latter in the vagina; intervening structures may thus be grasped between them, and their character and nature more fully ascertained.

Much as it has been abused, too, there are cases in which the employment of Simpson's *uterine sound* is indispensable for arriving at a correct diagnosis. When necessary, it should not be paraded, as the introduction of an instrument of any kind into the vagina is especially repugnant to the feelings of the patient. Being warmed by placing it up the sleeve, or by moderate friction with the hand, the opportunity of the fingers being in the vagina should be taken for its use, if it should, after other examination has been made, appear desirable. The point of the instrument must be guided by the examining finger to the os uteri, when gentle pressure will enable it to enter the cavity of the cervix. The points which are to be ascertained by it are, the length of the cavity and its direction, the mobility of the womb, and thus its attachment to other structures or organs within the simultaneous reach of the examining finger, or of the finger placed in the rectum. The thickness of the wall of the uterus may often thus be estimated

at the spot which corresponds to the extremity of the sound. Accidents have arisen in connection with its employment, and even metritis has been said to have been occasioned by it: I have met with none of these, however, in my own practice. It need scarcely be said that the suspicion even of pregnancy must decidedly negative its employment, and that when used all roughness of manipulation must be most carefully avoided.

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REMARKS UPON BLOODLETTING.

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HOWEVER medical men may be inclined to account for the fact, no one will deny that the lancet is now used only about once in a hundred times to what it used to be, and, when it is used, not more than half the quantity of blood is drawn to what used to flow on these occasions.

But while there exists among the most experienced practitioners a general disinclination to draw blood in the treatment of disease, *as a matter of fact*, it will be found, on referring generally to the popular treatises of medicine, that a similar caution has not yet been established *in theory*. The veteran, who has grown grey in wandering from one sick bed to another, has formed his own criteria as to what cases will be benefitted by bleeding, and what injured thereby. Experience, that most valuable teacher of our art, has given him certain indications, which he grasps intuitively, and as it were unconsciously to himself, and he becomes independent of medical authorities. But at what a cost has he gained his experience! The tyro, on the contrary, who rushes from the schools to engage in the encounter with disease, must use as his first weapons those elements of instruction which he has drawn from books and lectures: and how often do they serve the purposes of his adversary, rather than his own! I would appeal to those who have been for some time engaged in this warfare, whether they did not during their first years of practice bleed many patients, who, with their more enlarged experience, they would now decline to expose to such treatment. And, if it were not asking

rather too delicate a question, whether they could not recall some cases in which such treatment has turned the scale against the patient?

But I shall probably be met here by the observation, that—

“Tempora mutantur, et nos mutamur in illis”—

that, in fact, a change has been taking place, either in the constitution of disease, or in the constitution of man, or in both; that there are diseases which were formerly benefitted by bleeding, but are now injured thereby; and that there are diseases in which, although it is still proper to bleed, yet a much smaller quantity of blood should now be drawn than formerly.

There is no doubt much truth in this remark. As population increases and civilization advances, the grand struggle of life becomes more intense, the energies of man are kept constantly on the stretch, and the result must be that the circulatory system is unduly depressed, while the nervous system is as much exalted. Such a state of things we know to be eminently ill adapted for depletion.

It is also no doubt true that the constitution of disease has a tendency to change, being at one time *sthenic*, and at another *asthenic*; that in epidemics, more especially, the same disease will at one time require a lowering treatment, and at another will require stimulating. But such is our present ignorance on the subject of epidemics, and the constitution of disease in general, that it would be presumptuous to assign any reason for these variations.

Still, granting all their due weight to these reasons for the change which has taken place in the frequency of blood-letting, I am inclined to attribute by far the greatest influence to the general improvement which has of late taken place in the practice of our profession. I can understand how the epidemic constitution of fevers may so far vary as at one time to require the use of blood-letting, and at another time to render the employment of such means dangerous. I can also understand how the constitution of man may, under the influence of external impressions, so far change, as to make him at one time capable of bearing large depletion in a disease in which at another time he requires every drop of blood in his body to carry him safely through. This is quite intelligible; but still it will not

go very far in accounting for the great change which has taken place in practice as regards bloodletting. It must be owing to a different cause that the great numbers of bleedings which were formerly practised upon the victims of severe accidents, immediately after their occurrence, have now been discontinued; that as soon as a patient is struck down by a stroke of apoplexy, and before the system has had time to rally from the shock, he is no longer, as formerly, prevented from the chance of recovery by venesection; that in cases of acute rheumatism, a disease of a comparatively harmless character is no longer liable to be converted into the most serious cardiac affections by the effects produced in the blood by repeated abstraction. It would be easy to lengthen the list, and to quote numerous diseases of the head, chest, and abdomen, in which it used to be the fashion to bleed promiscuously, without either physiological reasoning or practical advantage.

In contradiction of the idea that it is chiefly owing to a change in the constitution of disease and of mankind that practice has so much altered in respect of bleeding, may be alleged the fact that there has been of late years a great increase in longevity. It is well known that Insurance Tables have had to be altered frequently to meet the lengthening term of human existence. This I may be told is due to the more healthy mode of living generally adopted. It is so in great measure; but I would also claim for our profession a large share in the accomplishment of this object. I believe it is very much owing to our improved skill, and especially in the matter of bleeding, that a man may now come to fourscore years without experiencing, as in the days of the Psalmist, labour and sorrow. But supposing that the large bleedings of former years were suited to the existing constitution of disease and of man, the patient should have recovered as completely from the effects of his malady then, as he does now with the present constitution under the more cautious abstraction of blood. And I think few will argue that this was the case. Moreover, the effects of copious bleeding are far from being limited to the time during which an acute disease runs its course in the human frame. The inflammation, forsooth, passes off, the patient recovers, and the medical attendant is praised as a bold practi-

tioner, who did not hesitate to use the most vigorous treatment for the relief of the invalid. It is very proper that he should be so praised, for he more frequently incurs blame where he no more deserves it, and thus something of a compensatory balance is struck in his favour. But I suspect that the large loss of blood which has been thus incurred by his patient is often the first link in the chain of many secondary causes, which exercise a slow but detrimental influence on his system, and beget alterations which ultimately prove fatal.

It would perhaps throw some light on the question as to how far depletion by bleeding ought to be carried, if we were to consider the changes which different classes of disease produce in the blood; and also the modifications of that fluid which ensue upon bloodletting.

Now we find that the different constituent parts of the blood are very differently influenced by losses, whether produced artificially or idiopathically. Thus the globules of the blood are immediately and quickly diminished by both bloodletting and hæmorrhages. The fibrin, on the contrary, appears to be independent of the influence of bloodletting in the diminution of its amount. And by not being capable of diminution under the use of a remedy which is diminishing other constituents of the blood, it follows as a matter of course that as those other elements are lessened, *its* proportionate and relative amount must be increased. This difference in the manner in which the globules of the blood and its fibrin are influenced by bloodletting is I think an interesting fact, and might be turned to advantage in deciding upon the proper amount and frequency in using that remedy. Mr. Simon has lately proposed a theory of the origin of fibrin in the blood, which would go far to explain why its diminution should be under the action of different laws to those which preside over the amount of globules. He considers that "the source of this element is to be sought for either in the decay of the blood itself, or in the waste of the tissues."

Andral found it impossible by the most copious use of bloodletting in cases of inflammation to prevent the amount of fibrin from increasing. This pathologist, indeed, appears to consider

the essential nature of inflammation to consist of an augmentation of fibrin in the blood.

Now here we come at once to a great diversity between theory and practice. If you questioned the practitioner as to what class of maladies most require the use of bloodletting, he would probably answer, "the inflammations." And yet, in these very diseases, bloodletting would increase relatively that very element, upon which the essence of inflammation is said to depend, viz., the fibrin. In this dilemma the safest course probably for the practical man to adopt would be the following:—Without going the length of saying that the increase of fibrin in the blood *constituted* the inflammation, he would pay great respect to the knowledge of the fact, that an increase of fibrin in the blood does really *accompany* all inflammations. He would remember that bloodletting will relatively increase that proportion of fibrin. He would couple these facts with his knowledge that a great portion of the danger of inflammatory affections arises from the deposit of fibrinous exudations from the blood. And while he does not hesitate to use bleeding at the commencement of acute inflammations, from an experimental knowledge of its value, he will be careful not to push it too far, or use it too late, lest he should thereby increase that element in the blood, which, by being deposited on the inflamed tissues, may give rise to fatal consequences.

If now we turn our attention to the use of bloodletting in cases of *active hæmorrhage*, it will be satisfactory to find that theory and practice run more together. The fact, that loss of blood, whether spontaneous or artificial, does not diminish, nay that it relatively increases the amount of fibrin in the blood, is here of great value. It is the means which nature avails itself of, and which science keeps in view, in order to arrest the flow of blood. For when a vessel is ruptured, and blood is poured forth, the globules are rapidly diminished, but the fibrin remains in amount as large as ever, *absolutely*, and *relatively* more. Under the influence of syncope the retarded stream of blood is enabled to deposit its unexhausted fibrin, and thus to repair the broken vessel. Now had the fibrin been subject to the same rules of diminution

under the use of bloodletting as the globules, this reparative process could not take place, and death would frequently ensue, where life is now thus preserved. Valsalva, as is well known, availed himself of frequent bleedings to cure aneurisms, though he was probably ignorant of the fact that the fibrin of the blood was relatively increased thereby. And theory approves of his treatment. A case occurred in this town about two years back, which was seen by several medical gentlemen, in which an individual, to use a common expression, broke a blood-vessel. It is difficult to say what vessel was ruptured, but from the way in which the blood was hawked up, it appeared to come from no great depth. It was bright, and was brought up at first in very large quantities, and was scarcely mixed with air. There was no dyspnoea, only a slight hacking cough, and the chest was equally raised on inspiration. Auscultation could detect no dulness anywhere. The patient was not phthisical. The general opinion was that he would die; but under the use of constant bleedings he recovered, and is at the present time in the enjoyment of robust health.

If, again, we consider bloodletting in diseases which originate in a plethoric state of the system, we shall find that theory sanctions the application of this remedy. But it is necessary here, carefully to distinguish between *true* and *false* plethora. In the true plethora there is a large increase in the amount of globules in the blood, while the fibrin remains within its normal limits. This disproportion between the globules and fibrin is the cause of sundry disturbances taking place in the system, and among others is a frequent cause of effusions of blood. Now in these cases a judicious bleeding will restore the balance between these two elements, and save the patient perhaps from a fatal attack. But, as I have said, it is here very essential not to mistake the false for the true plethora. In the false plethora, although the individual may be stout and even more ruddy than usual, the globules of the blood are not only not in excess, but are even diminished. Such individuals are in fact anemic, and by them it is well known that bloodletting is borne very badly.

For, in diseases depending upon the anemic condition, the globules of the

blood are diminished in amount, while the fibrin, relatively to the globules, is in excess. Such a condition of fluid would be theoretically opposed to the use of bloodletting, and we find in practice that it is better to limit ourselves to local depletion by leeches in those congestions and sub-acute inflammations, which are very apt to arise in this condition of the blood.

Let us now turn to the use of bloodletting in fevers. It is well known that the propriety of bleeding in fever has been a subject of great controversy. Sometimes it has been in favour, and at other times out of favour. Now if we examine the cause of this varying shade of opinion, we shall find that it arises from the fact, that in fever, *merely as fever*, there is no fixed condition of the blood; there is no necessary diminution or increase in any of its elements, as there is in inflammations, &c. If in inflammatory action arises in the course of a fever, there would be an increase in the proportion of fibrin, while in low typhoid forms of fever there is a sensible diminution of that element, giving rise to sanguineous exudations, especially from the mucous membranes. In using therefore bloodletting in fevers, theory would prescribe what experience has sanctioned, viz., that regard should be had solely to the peculiar constitution which the prevailing epidemic assumes. At the present day it is well known that we do not venture to bleed in this class of maladies. But it is fair to suppose that in days gone by, when bleeding was more in fashion, physicians were not all Sangradas, and that the distich written on Dr. Lettsome was not applicable to all.

But I shall weary the reader's patience if I continue this enquiry further. If I have already done so, I must plead the importance of the subject as my apology. The whole question of bloodletting is one which in my opinion requires revision. The tide of popular opinion, which but a few years back set strongly in its favour, is now beginning to ebb and flow in the other direction. Valuable as I esteem it to be when judiciously employed, there is, I think, still a fear, if indiscriminately used, the public will so far set their faces against it, that we shall be unable to prevail upon our patients to submit to it when necessary. And necessary I have no doubt it frequently is, for,

though not unfrequently carried to excess, I am not quite prepared to assert that it is *one of the fallacies of the faculty*.

ON INFANTILE REMITTENT FEVER

WITH ESPECIAL REFERENCE TO ITS
DIAGNOSIS FROM HYDROCEPHALUS.

By CHARLES TAYLOR, M.R.C.S.
Late Surgeon to the Royal South London
Dispensary.

[Concluded from page 150.]

THE great amount of mortality registered, even in the very early age of infancy, from typhus fever, would lead us to doubt whether there has been sufficient accuracy in detecting the cause of death, and whether some of the affections of childhood, in which fever is a prominent symptom (for instance, pneumonia) and in which a typhoid state has supervened, have not been registered under that term. Such high rate of mortality does not accord with the statements of authors, nor with my own experience, in fever of any type among children. I would suggest, therefore, that in future, fever occurring in children should be registered merely as "Infantile fever, giving the age, as "2 to 5," "5 to 10," and not specifying remittent or typhus under that age.

Note.—It would be curious and satisfactory to learn if remittent fever often occurred, and if so, the mortality in the various large establishments for children in this country, as the asylums, pauper farms, &c.

In the Fifth Annual Report, we find that in Norwood Pauper Asylum, out of 101 deaths in 5 years, there were only three from remittent fever, and this in an establishment of upwards of 1,000 children. The situation is healthy, being high and dry.

A consideration, however, of the mortality, which is slight in proportion to the frequency of the disease, does not enable us to draw any conclusion as to the more frequent time of its occurrence, or the proportion of fatal cases; for, as Caspar observes, "Where there are the fewest deaths, there is often the greatest amount of illness," a remark applying especially to this disease, which is often epidemic, and seldom terminates fatally,

except in the production of other disease.

In the Medical Report of the In-

firmary for Children, 1846-7, the relative number of cases at the respective ages was as follows:—

TABLE VI.

| Under | 1 Year. | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
|------------------------------------|---------|----|----|----|----|----|----|----|----|----|-------|
| Cases of Remittent Fever | 13 | 24 | 23 | 28 | 24 | 17 | 11 | 15 | 9 | 1 | = 162 |
| Cases of Fever | 14 | 34 | 21 | 28 | 28 | 19 | 17 | 16 | 15 | 11 | = 203 |

thus showing the greater number of cases occurred in the 4th and 5th year.

In a table of cases, amounting to upwards of 100, which have been under my own care, the most frequent age was from the 5th to the 7th year.

Dr. Bateman's Report, previously alluded to, and which extends over a period of nearly twelve years,—viz., from 30th November, 1804, to 31st August, 1816, shows the relative number of cases occurring in the four quarters to be as follows: in the autumn quarters there were, 128; in the summer, 112; in the spring, 92; and in the winter, 91 cases; thus showing its greater prevalence in the autumn.

Prognosis.

The prognosis of remittent fever is favourable, the concurrent testimony of all authors being that it is rarely fatal; and when it is so, it is from one or other of the affections which arise in its course, as ulceration of the bowels, hydrocephalus, phthisis, or mesenteric disease. Hence, when fever occurs in scrofulous children, it is more likely to terminate in one of the three last named affections, and the prognosis would then be less favourable. In the simple and the acute forms, it usually terminates in convalescence; those, however, who see it among the poor, will occasionally meet with a fatal case in the typhoid form of the disease: in the chronic and gastric forms a fatal termination is rare, except by one or other of the complications.

In judging of any individual case, we must be led to form our opinion by the concomitant circumstances,—as the previous health of the child, the habitation, cleanliness, and ventilation, as we have frequently noticed the almost sudden improvement in fever in a child, when it has been removed from its own badly ventilated and unhealthy home, to the wards of an hospital, and its skin got into a clean state.

Indications of an unfavourable termination are,—the fever assuming the typhoid form, the tongue becoming dry, cracked, and brown; severe abdominal pain increased on pressure; or, in fact, those symptoms which would indicate the supervention of cerebral and abdominal mischief; and these have been so fully entered upon that it is unnecessary to recapitulate them. The tongue becoming clean and moist, the excretions becoming more natural, the paroxysms of fever being of less duration, the skin becoming cool, and gently perspiring, are indications of returning health.

In Rilliet's and Barthez's observations, 29 terminated fatally out of 111 cases; Dr. West only refers to two fatal cases, and attributes the large amount of fatal cases by Rilliet and Barthez to the unfavourable circumstances in which patients are placed in the Hôpital des Enfants.

The prognosis appears to be very unfavourable when the disease occurs in hot climates, for Dr. Copland states, "that many children born of European parents in hot climates, are cut off by it before they reach their sixth or seventh year;" and Dr. J. Bird also remarks, that it proves "so fatal to infants and children of newly arrived European regiments."

In Dr. Golding Bird's report of 86 cases, there are only two reported to have terminated fatally,—one by hydrocephalus, and one by phthisis; and in the cases which occurred in his ward, at Guy's Hospital, during the spring and summer months in 1849, there was not a fatal termination: the same remark also applies to the cases under Dr. West, at the Infirmary for Children, during the same period.

In my own practice I have only had three fatal cases,—one a typhoid case, one terminating in cancrum oris, and one in mesenteric disease. The first

was a genuine case of malarial fever, the second occurred after measles, and was one of a gastric intestinal nature, and in the last, all trace of the original affection was gone.

Underwood has remarked, "that the disease is remarkable for being always devoid of danger."

Dr. Locock does not, however, quite agree with him, and says, he has never met with it fatal in the acute form; when death has occurred it has been from dysentery, or gastro-enteritic inflammation.

Drs. H. Davis and Willshire are also of opinion that "simple remittent fever is rarely fatal;" and certainly even the severe typhoid cases, requiring wine, and a free use of stimulants, we have seen recover, although after a long and tedious course.

Although it does not coincide with the statements of the Registrar-General,

I believe that fever occurring in a healthy child is very rarely fatal.

Two symptoms are alluded to by Coley as auguring unfavourably,—viz., "a discolouration and separation of the skin" in the advanced stage of the disease; they are not mentioned by other writers, nor have I ever met with them: perhaps they may be classed with petechia, as indicating a low state of vitality.

The following table, compiled from some of the Weekly Bills of Mortality, is interesting, in showing the more frequent fatal termination of fever in children at one portion of the year; that brain mischief is the more general cause of such fatal termination; and that under the different heads of "Remittent fever," "Infantile fever," and "Typhus," are placed cases, which are of the same character, and essentially the same disease:—

TABLE VII.

| Week ending. | Sex. | Age. | How registered. | Duration. | Fatal termination. | Duration. |
|--------------|------|----------|--|-----------|-----------------------------------|-----------|
| 1850. | | | | | | |
| Mar. 16th | M. | 6 months | Inf. remittent fever. | 2 months. | Hydrocephalus. | 14 days. |
| April 6th. | M. | 14 years | „ Rem. fever. | 3 weeks | Congestion of brain. | 6 days. |
| „ „ | M. | 7 „ | „ Rem. fever. | | With mesenteric disease. | |
| „ 13th | F. | 6 „ | „ Rem. fever. | 14 days. | | |
| „ „ | M. | 4 months | Do. | 10 days. | | |
| „ 27th | F. | 7 years | Tubercular dropsy 3 months, rem. fever | 8 days. | Hydrocephalus. | 24 hours. |
| May 4th . | F. | 4 „ | Remittent fever. | | Bronchitis and Phthisis. | |
| „ „ | M. | 3 „ | Remittent fever. | 13 weeks. | Bronchitis 2 weeks. | |
| „ 11th. | F. | 1½ „ | Inf. fever. | 3 months. | Convulsion. | 8 hours. |
| „ „ | M. | 8 weeks | Inf. rem. fever. | 3 weeks. | Convulsion. | 1 day. |
| „ „ | M. | 5 months | Do. | 3 weeks. | Congestion of brain. | 6 days. |
| „ „ | M. | 2 years | Remittent fever. | 8 days. | Congestion and effusion of brain. | 3 days. |
| „ „ | F. | 4 „ | Remittent fever. | 14 days. | Pneumonia. | 6 days. |
| „ 18th. | F. | 4 „ | Remittent fever. | 7 weeks. | | |
| „ „ | M. | 6 „ | Remittent fever. | 15 days. | | |
| „ „ | F. | 7 „ | Do. | 5 weeks. | Convulsive fit. | 2 hours. |
| „ 25th . | M. | ? | A young boy of intermittent fever. | | | |
| June 1st . | F. | 8 years | Fever. | 3 weeks. | | |
| „ „ | F. | 2 „ | Inf. rem. fever. | 7 days. | Meningitis. | 9 days. |
| „ 9th . | M. | 2 „ | Remittent fever. | 8 days. | Encephalitis. | 5 days. |
| „ „ | F. | 1 „ | Remittent fever. | | | |

Post-mortem Appearances.

Few as are the recorded post-mortem examinations, they tend to confirm our

opinion, that, whether primarily or secondarily—i. e., whether the disease has arisen from a direct exciting cause of gastro-intestinal irritation, or from mala-

rial influence—lesions of the gastro-intestinal mucous membrane are very frequent, and are often the immediate cause of death.

Pemberton has given the account of the examination of a case of remittent fever. "The intestines were exceedingly distended, and the mesenteric glands a little enlarged, but no inflammation of peritoneum, bowels, or other viscera, existed, nor any effusion into the peritoneum."

According to Dr. Joy, this enlargement of the mesenteric glands and inflammation of intestines was noticed by Hoffman.

Dr. Locock alludes to softening and abrasion of the mucous membrane; and where there have been dysenteric symptoms, ulcerations in the cœcum, colon, ilium, and rectum, have been observed.

Rilliet and Barthéz's conclusions, drawn from twenty-nine fatal cases, are—

"1st. That the lesions of Peyer's folds, isolated follicles, and mesenteric glands, are the same as in the adult; but the ulcerations were generally smaller, fewer, and less deep.

"2d. That the form of the alterations of the folds, in a very large majority of cases, is that described under the name of 'plaques molles.'

"3d. That ulceration did not necessarily follow inflammation, which might terminate in resolution.

"5th. That cicatrization proceeded with rapidity (they had seen it complete on the thirteenth day: at the third month the cicatrices were still manifest).

"6th. That ulcerations of the membranes are rare (once they found the peritoneum perforated; and in another instance the lesions of the glands approached true gangrene).

"7th. That the alterations in the spleen are far from constant.

"8th. That the blood is oftener fluid, or in blackish clots, and the vessels are often coloured, as of red wine.

"The alterations in other organs were—

"The pia mater was injected in those who died from the seventh to the twenty-first day; the subarachnoid tissue was infiltrated; the ventricles did not contain any great amount of fluid.

"Twice the heart had a degree of softness without cadaveric putrefaction being far advanced.

"The liver was often increased in vo-

lume; occasionally was pale and red: the character of the bile offered nothing constant.

"The kidneys were much congested in infants.

"In the spleen, when any alteration existed, it consisted principally in an increase of size, and softening of its tissue."

Dr. West mentions enlargements, tumefaction, and ulceration of Peyer's glands, as one of the most frequent morbid appearances. The changes these glands are found to undergo are more advanced and more extensive, in proportion to their nearness to the ileo-cœcal valve. The mesenteric glands are swollen, enlarged, of a deep red colour, and manifestly increased in vascularity; while the softened state of the spleen, gorged condition of the lungs, and congestion of the membranes of the brain, are appearances in both diseases—viz., infantile remittent fever, and continued fever in the adult.

Dr. J. Bird, in an account of the disease as he met with it in India, considers it analogous to the tropical remittent of adults, and remarks, "that the post-mortem appearances are the same,—as morbid enlargement of the muciparous and mesenteric glands, congestion of the liver, softened and enlarged condition of the spleen, and vascularity of the mucous membrane of the stomach and intestines: engorgement of the lungs, congestion of the brain, and serous effusion into the ventricles, are observed after death." It happened either as a primary disease, caused by malaria, or as a secondary one proceeding from gastric irritation produced by cold, damp weather, improper food, and teething. Like other fevers, he has found it terminate in mesenteric enlargement and marasmus, or occasionally in albuminous nephritis, with effusion into the abdomen, and anasarca swelling of the legs.

Dr. Löschner, physician to the Children's Hospital at Prague, in eight fatal cases says there was a greatly enlarged and highly injected state of the mesenteric glands, more constant than ulcerations of Peyer's, and on this builds an hypothesis that what is called typhoid fever is acute scrofula.

When fever proves fatal by its complications or sequelæ, as hydrocephalus, phthisis, mesenteric disease, or cancrum oris, the post-mortem appearances pecu-

liar to these diseases will be noticed; and as these are not essential to remittent fever, their description is not required in this place.

The two following cases, with which I have been favoured by Dr. West, will serve to illustrate the post-mortem appearances in this disease.

CASE XXIX.—*Acute Remittent Fever, terminating in Cancrum Oris.* (Communicated by Dr. West.)

A boy, æt. 8, was attacked by febrile symptoms, October 1st: treatment began Oct. 8th; delirium about Oct. 17th, and was a prominent symptom throughout.

26th.—There was swelling of face; the child being then much exhausted; and there was ulceration of the left cheek, which extended, and was accompanied by blackening of the surface of the cheek, but not going on to actual perforation, and terminated fatally November 1st.

Post-mortem Examination.—In addition to the ulceration of the cheek, the blood was generally fluid; the right lung was healthy; the left had its lower lobe in the first stage of pneumonia, and partly in the second.

The mesenteric glands were enlarged, softened, dark, livid, and congested. In the whole lower third of the ilium there were enlarged Peyer's glands; and for about eighteen inches of the lower end there was ulceration of each. Close to the ileo-cæcal valve, and partly involving it, there were two large oval, deeply ulcerated patches, and a small vascular ulcer a little below the cæcum.

The spleen was dark, soft, and large.

CASE XXX.—*Remittent Fever, with Head Affection, becoming Typhoid, and terminating fatally in Gangrene of the Left Cheek.* (Communicated by Dr. West.)

M. J., female, æt. 6½; resides in the New Cut.

February 20th, 1846.—Had been ill three days with constipation and pain in the head. On the 22d the case had assumed much more distinctly the character of severe remittent fever, the symptoms being referred to the abdomen quite as much as the head; there was more oppression of the intellectual powers than usual, and less tendency to diarrhœa, but the head grew much clearer under a generally stimulant plan

of treatment, of which, for some days, wine formed a part, and which included the æther and acid mixture of Steiglitz. A blister to the abdomen was followed by marked diminution of the abdominal pain and tenderness, and up to the 6th of March the patient improved; her tongue began to regain moisture, and the general state grew more and more improved.

March 8th.—The child considerably better; but there was considerable swelling on the left side of the cheek, being about the angle of the jaw, and the skin was rather red and shiny; this had been noticed by the father on the evening of the 6th: inside the mouth there was evident gangrene, though not extreme, and the first lower molar was laid bare, and almost dropped out. Hydrochloric acid was applied four times, and the chlorate of potass freely given internally; but the gangrene extended, and the child died on the 15th, at 1 A.M. There had been difficulty of deglutition, but no respiratory disturbance or croupal breathing at any period.

Thirty-eight hours after death.—Weather temperate, but wet.—Gangrenous odour horrible; child extremely emaciated; nearly the whole left cheek was swollen, of a dark, livid hue, and pitted slightly on pressure; the gangrene involved chiefly the lower lip; the slough had not separated—was altogether about the size of a crown piece, and the whole thickness of the cheek was affected; the cellular tissue was infiltrated by a sanious dirty serum; the facial artery was plugged by a clot.

The œsophagus coated with moderately firm yellow, false membrane.

The trachea was free from disease; but some ill-formed patches of false membrane lay on different parts of the larynx.

The stomach was quite healthy, as were the abdominal viscera; the mesenteric glands in the neighbourhood of the caput coli were of an intensely red colour—seemed swollen and infiltrated; the whole tract of intestine was examined, and, with the exception of the last three feet of the ilium and the cæcum, was found healthy. In the ilium several patches of Peyer's glands were ulcerated: the ulcers, however, were not numerous, nor extensive, nor deep; their edges were not sharp; there was no great vascularity about them, but a small yellow slough at the bottom

of a few of them. It appeared as if the disease in the intestine was not extending; but there was not power enough for its reparation. In the cæcum were several solitary ulcers in a similar condition.

In the chest was no disease. Lungs pale, bloodless, rather than congested; heart pale, containing a small black coagulum in its left auricle, which extended for some distance into each pulmonary vein; also a small fibrinous coagulum in the right auricle.

Treatment.

The treatment of infantile remittent fever depends on the form which we have to deal with.

(1.) Where there has been evidence of its arising from improper or over feeding, a brisk purgative will be necessary if the bowels are confined; and for this purpose, calomel, combined with rhubarb or jalap, or by itself, followed by a senna draught, or castor-oil in a younger child, may be given.

After free action of the bowels has been produced, a simple saline mixture, composed of liq. ammon. acetatis, with spirits of nitre, or the solution of citrate of potass, should be given three times a day. If sickness or nausea are present, the effervescing mixture is preferable, to which a drop of the dilute hydrocyanic acid may be added; generally, however, if there is no nausea, I give the sesquicarbonate of soda, in doses of five to ten grains, three times a day in any vehicle. The bowels may be afterwards regulated by a combination of hyd. c. cretâ with rhubarb, given occasionally.

In some cases the commencement by an emetic is useful, as by this means we more effectually clear out the entire intestinal canal.

(2.) In the mild form of the disease the preceding plan of treatment may be adopted, with the exception of substituting for the brisk purgative two or three grains of Hyd. c. Cretâ, followed in the morning by a drachm or two of castor oil.

(3.) The acute form, when uncomplicated, does not require anything further in the shape of medicine, as I believe it is the best rule not to use any active remedies unless a clear and sufficient indication calls for them.

(4.) When the disease is epidemic, and can be fairly traced to malaria, it will be our first object, as far as possi-

ble, to remedy these conditions (remembering that the disease once fairly established cannot be cut short, and our object is to guide the patient safely through it) by having the room well ventilated, clean, cool, and free from extraneous articles of dress: these precautions are equally necessary in all forms of the disease where the character or habits of the patient's friends require it.

The warm bath should be used about 100 to 110 degrees Fah., and repeated every or every other night; it acts not merely by cleansing the skin and promoting its healthy functions, but also by quieting the nervous system, as frequently I have seen fractiousness and irritability relieved by it, and a more refreshing sleep follow its use. The soda mixture, or the other salines, may be given, and, as soon as the tongue becomes clean, a mild bitter, as the infusion of calomba with soda, or quinine may be substituted. Dr. Golding Bird, as soon as the remissions are well marked in this form, gives the disulphate of quina, in two grain doses, as an ante-periodic remedy: latterly, he has used the sulphate of bebeerine instead of quinine with, I believe, much success. Quinine in smaller doses, simply as a tonic, is very useful; perhaps the more strictly malarial is the attack, and in proportion as it is free from gastric disturbance, the more decidedly useful is quinine.

(5.) If obstinate constipation is present a repetition of the purgative must be had recourse to. Drs. Butter, Pemberton, and Locock, allude to the fact of most powerful and repeated purgatives being required. Pemberton relates the case of a child, aged three years, taking twelve grains of calomel and scammony, and twelve grains of the extract of jalap, but at the same time cautions that they should not be carried to a great length, but merely to remove the contents of the bowels. It is but rare such powerful purgatives are required; and, as Sydenham remarks, we must be careful lest "*Sæpius ægro non nisi morte medebimur.*"

(6.) If diarrhœa is present the chalk mixture may be given, to which a small quantity of syrup of poppies, or one or two drops of tincture of opium, may be added. If at the same time the motions are clayey, and deficient in bile, two or three grains of Hyd. c. Cretâ, or the Pulv. Sodæ Compos. of the Guy's Phar-

macopœia, in four or six grain doses, may be given every or every other night. When there is pain, increased on pressure, in the iliac regions, or in any part of the abdomen, and the diarrhœa assumes the character of dysentery, repeated hot linseed meal poultices should be applied, and may generally be relied on for relief. The mustard poultice might also be tried in the first instance; and in some few cases it might be advantageous to apply two or three leeches or more, but I have never found it necessary in my own practice. The Hyd. c. Cretâ, gr. $\frac{1}{2}$, or gr. j., with Dover's powder, gr. $1\frac{1}{2}$ or $2\frac{1}{2}$, may be given at bed-time, or repeated twice a day, according to circumstances, together with the chalk mixture. The starch enema, with the addition of half a drachm of syrup of poppies, or four minims of the tincture of opium, is a very useful remedy in these cases.

(7.) In the chronic form, where the secretions are depraved and the appetite bad, the combination of the sulphate of potass with rhubarb is a most useful aperient; and the Mistur. Rhæi Comp. (P. G.),—namely, a combination of rhubarb, soda, and calomba, is often of the greatest service. If a mild mercurial alterative is required, Hyd. c. Cretâ with rhubarb may be given every other night.

Drs. Locock and Willshire speak highly of the mineral tonics in this form of disease. Where stomatitic or aphthous ulcerations are present, the chlorate of potass, in five grain doses, three or four times a day, is an admirable remedy, applying also to the part a weak solution of the nitrate of silver, and using a lotion of borate of soda.

(8.) If worms are present, a brisk purgative of calomel and scammony may be given to dislodge the long thread worms, or an enema of lime water for the small thread worm; but, as they depend on the deranged condition of the mucous membrane of the intestines, the object of the treatment will be to remedy that deranged condition, and as it is restored to a more healthy state, and convalescence becomes established, the worms will usually disappear. The compound rhubarb mixture, or the infusion of gentian, may be given two or three times a day.

(9.) For the slight bronchitic symptoms frequently present, the addition of ipecacuanha wine to each dose of the

mixture is all that is required. If acute bronchitis or pneumonia should supervene, they must be treated according to general rules. Frequently the indications of circumscribed pneumonia, as shown by dulness and slight crepitation, exist: for them nothing in general is required beyond desiring the nurse to turn the patient frequently. This has been pointed out by Dr. G. Bird, who considers it arises from congestion, and usually vanishes as the patient recovers.

(10.) Should indications of tubercular disease of the mesenteric glands or of phthisis develop themselves, they must be treated accordingly: for the former the liquor potassæ internally, and counter-irritants, as the iodine ointment externally, should be had recourse to; for the latter I have not much to recommend, except perhaps, when the stomach will bear it, the regular and continued use of cod-liver oil. In impaired general health, after gastric disturbance with fever, I have seen it of the greatest service.

(11.) The cutaneous affections which sometimes are present require no modification in treatment. The more chronic skin diseases must be treated according to the rules laid down for such disorders: we may remark, however, that they will be chiefly benefited by those means which tend to improve the general health.

(12.) The typhoid form of this disease will require more general support, and ammonia, with the infusion of serpentary, quinine, or ammonia and decoction of bark. Drs. Locock and West speak highly of a mixture of æther and hydrochloric acid (Steiglitz's mixture), but of this I have had no experience. Wine, beef-tea, arrow-root, animal jellies, will also be required. If the patient gets no sleep, a few grains of Dover's powder may be given at bed-time with great advantage. Care should be taken that the bladder is not allowed to become distended; if there is retention or involuntary discharge of urine, the catheter should be passed. If bed-sores occur, the liquor plumbi diacetatis may be applied, by means of a camel's hair brush, every morning, and the part dressed with simple cerate or a weak solution of nitrate of silver (gr. ij. to 3j.), or sulphate of zinc (gr. iv. to 3j.) may be used in a similar manner.

(13.) For the sympathetic cerebral symptoms that are usually present, all that is required is to have the hair cut

close or shaven, and apply the cold spirit lotion; for, as Dr. G. Bird says, "the delirium and great irritability are part of the disease," and require no active interference. Cheyne, however, recommended antimonials with calomel in those cases of remittent fever where the sensorial functions are much attacked, as also in the commencement of febrile attacks of a less definite nature, which are liable to degenerate into hydrocephalus, and considered that, if more frequently used, the termination in hydrocephalus would be less frequent.

(14.) If symptoms denoting more than functional disturbance of the brain arise,—for instance, pain in the head, constant vomiting, and nausea,—it will be advisable to apply a few leeches, either to the temples or the mastoid processes, and give mercurials, as small doses of calomel or Hyd. c. Cretâ two or three times a day, or oftener if the cerebral symptoms are urgent, avoiding all undue irritation of the bowels; for hydrocephalus supervening on remittent fever will not bear the more antiphlogistic remedies required when it arises idiopathically: in short, although the head affection requires our attention more than the original disease, inasmuch as it is more fraught with danger, we must always remember that the patient's health has been in some measure exhausted by the previous disease. The cold lotion, or a bladder of ice, should also be applied to the head, the room kept dark, cool, and quiet. If a convulsion should occur, the child may be placed in the warm bath, and at the same time a douche of cold water applied to the head. Sinapisms to the soles of the feet or calves of the legs may also be had recourse to.

(15.) When the head symptoms are insidious, and loss of blood contra-indicated, a blister on the nape of the neck, or the application of Acetum Lyttæ, afterwards dressed with the Ung. Hydrarg. Mitius, should be used, with small doses of mercurials; endeavouring to avoid irritation of the bowels. Among counter-irritants, which are very serviceable in proportion as the symptoms are chronic, is the repeated use of the tartar emetic ointment to the scalp, which is sometimes attended with marked benefit.

(16.) When we consider the cerebral symptoms present depend not on any amount of activity or inflammation, but

rather on want of power, denoting what has been termed "hydrencephaloid disease," the remedies before mentioned must on no account be had recourse to, as they would aggravate the mischief, but a few drops of spirits of Ammon. Foetida may be given three or four times a day; ammonia in solution, or a small quantity of wine, may be required, and the free use of nourishment. In these cases of exhaustion a grain and a half to two grains of Dover's powder at bed-time will be found of the greatest service.

(17.) In general, a light diet, as cold water, toast water, or barley water to allay the thirst, thin arrow-root, or milk and water, is all that is required in the simple and acute forms in the early stage of the disease; afterwards beef-tea, veal, mutton broth, light animal jellies, isinglass dissolved in milk and water, may be given: in the typhoid form they are required earlier, and in a more nutritious state,—the addition of wine to the jelly, or diluted with water, to the amount of one, two, or more ounces in the day. By degrees, light bread pudding, bread and milk, fish, may be given; but the return to ordinary diet should be postponed for some time, as relapses are sometimes produced by it, or the patient rising too soon from his bed and mixing with the other members of his family.

(18.) As the patient improves, nothing tends so much to restore his general health and strength as a change of air, particularly sea air; and in fact, when the disease has arisen, as it most usually does, from malaria, or general endemic causes, this change should be had recourse to earlier, as it not only affords means for the recovery of health, but also removes the child from the direct source of disease.

(19.) In conclusion, I have but *sketched* out the plan of treatment in head affection supervening on remittent fever, but would remark that on a correct diagnosis the success of our treatment depends; that it is of the utmost importance, when our diagnosis is determined, to act energetically in the treatment of inflammatory affection of the brain; and it is equally important to avoid those energetic measures in sympathetic irritation, or in *pseudo*-hydrocephalus.

MEDICAL GAZETTE.

FRIDAY, AUGUST 1, 1851.

THE proposed amendment of the PATENT LAWS cannot but have a medical as well as a general interest. It is only a common-sense view of the matter, that a man who makes a useful discovery, and thereby confers a benefit on society, should have a temporary monopoly, and that this should be secured to him by some easy, cheap, and simple process of law. The present system is defective in every point of view; it is costly, insecure, and complex to such a degree as to lead to endless litigation, and ultimately to the ruin of the patentee as well as of the infringers of his rights. Thus, if an invention be not new, or if some part of it have been used either in this country or abroad, before the issuing of the patent, and not subsequently disclaimed, or if the enrolled description be not minutely accurate in its details,—then, in spite of the expense already incurred, the patentee loses his right to the exclusive use of it. There may be a considerable improvement on old processes in his invention, as well as great benefit to the public in the results obtained by it, but the English law thenceforth allows every unscrupulous person to pirate it; and further, while the Government in no case returns the heavy fees thus proved to have been wrongly taken, it compels the inventor to publish such a description of his process that all who are acquainted with the subject may make use of any part or of the whole of the specification. In the event of a legal contest, a patentee has to encounter all kinds of legal quibbles, and in short, in reference to a really valuable invention, a man has no chance of deriving any

benefit under the present state of the law, until after he has gone through the discipline of half a dozen law-suits, and has spent some thousands in having his legal rights properly defined!

The whole of the present machinery of the law regarding the issuing of patents, is a maze of absurdity. Patents are granted for medicines without any regard to the benefit of the public; so that the fees of Government are duly paid, the patented pills or mixtures may be swallowed, and the public may sacrifice either money or life to a gross fraud. This indefensible and injurious system may possibly receive a check under the new measure which it is proposed to enact into a law. A patent was once taken out for an instrument to cut off the crowns of teeth so as to render extraction unnecessary (!), and as these matters are decided by men who have not the slightest pretension to medical or surgical knowledge, the most useless, absurd, and even injurious inventions may by the present patent laws receive a quasi-legal sanction. It is true that if the invention be injurious, there is a cure for the evil so far as the public are concerned, in the fact that it can never come into general use; but what we desire to know is, why the Government of a civilized country should thus entrap enthusiastic and ignorant persons into the payment of heavy fees for a purpose which any scientific man could inform them, would, if carried out, be of no benefit to the inventor or the public. Again, a patentee may, perhaps, innocently incorporate in his patent some part of a process for which the Government has been already paid by another inventor. The inequitable proceeding here is, that the Government will take enormous fees from both parties, and then leave them to fight out the cause of dispute in Westminster Hall, when, on the principles of justice and common

sense, a patent should be refused, if it involves that which has been already patented and paid for, or if, in the judgment of competent persons, the process be neither new nor useful. The present system, therefore, is nothing less than obtaining money under false pretences on a very large scale. The Government pretends to sell to one person a right which it has already partially or wholly sold to another, or to sell for a heavy consideration what is already the common property of the public! In a recent debate in the House of Commons the Attorney-General remarked that the public (including inventors) ought to be guarded against the assumption of rights in regard to inventions, where the inventions were neither new nor useful; and in those cases where rights were properly conceded to inventors, these rights should be protected by a short and cheap process. Under the present system, an application for a patent must pass through no fewer than seven different offices. It is thus described in the debate to which we have referred:—

“A person must first apply to the Home-Office, then he was referred to one of the law officers, who, after inquiry, reported on the application to the Secretary of State, in order to obtaining what was called the Queen’s warrant; next he was referred to the Patent Office for the Queen’s bill, and, having obtained that, he went to the Signet Office for the signet bill; then he had to proceed to the Privy-seal Office for the privy seal; after that to the Great Seal Office, where the final order was made out for the patent. Now, at least five out of these seven applications were absolutely useless, and mere matters of form. Then the cost was £94. 15s. If he wanted to extend the patent to Scotland, he must go through five other offices in Scotland, at an additional expense of £63; and if he wished to extend it to Ireland, he had to pass through five other offices, with a further expenditure of £119,—making in all an expense of upwards of £276. If there were two persons joined in the patent, additional fees were

exacted, which brought the sum to above £300.”

In the new measure it is proposed to issue one common patent for the three kingdoms, and to reduce the trouble and expense of applications. The payment of the expense by instalments is also another excellent feature in the bill, as a man may, without incurring the whole expense, discontinue the use of his invention at the end of the fixed term, if it should not be profitable.

“It was proposed to distribute the sum expended into three separate payments,—one when the patent was first granted; another at the end of three years; and the third and largest at the end of seven years. This would give poor men an opportunity, which they did not at present possess, of protecting inventions till such time as they might be able to derive advantage from them, and at a cost adapted to their means. It was proposed then that the first payment should be limited to £20, with additional £5 for stamps: at the end of three years the patentee might have a renewal for four years more on payment of £40, with £10 stamps. This gave him a patent right for seven years; and at the end of that period, when he had sufficiently tested his patent, and found that it would benefit the public and himself, he could extend his right for seven other years by paying £86, and a stamp duty of £20. Thus there would be a reduction in point of expense from £300 to about £170.”

This sum will be hereafter subject to abatement. It is fixed at its present amount in consequence of the necessity of making compensation to those who have a vested interest in the present abuses.

The most important feature of the Bill, however, is to establish a *Board of Scientific Examiners*, to whom all questions respecting the novelty or utility of patents will hereafter be referred.

“Then as to the mode of determining whether a party was entitled to a patent or not, that duty had hitherto devolved on the law-officers of the Crown. Now there were two objections to this tribu-

nal, and he thought them both well founded. In the first place, the tribunal was a secret one, though it should be considered that this secrecy did not arise from the will or inclination of the law officers, but from the necessity of the case; for it was made necessary in consequence of applicants being anxious to conceal from objectors and rivals what the nature of their inventions were till after the patent was granted. To do away with this, it was proposed to enable a man, at the same time that he applied for a patent, to lodge in the office of the commissioners to be appointed under the Bill, a provisional specification,—that was to say, a statement corresponding with the deposit now required by the law officers of the precise nature of the invention to be protected. As soon as he deposited that provisional specification, they would give him the power of patent for six months, and he would therefore incur no risk in using his invention, and making it known to the public. This protection would be for six, and in certain cases nine months, and it would be found a most valuable portion of the Bill. On the other hand, when a man objected to a patent, he must lodge the particulars of his objection in such a way that the case could be fairly heard before the parties entitled to decide. The second objection to the present tribunal was, that the law officers might be incompetent to do the duties aright for want of proper scientific knowledge; and therefore it was proposed to constitute a Board of Examiners composed of persons of scientific knowledge. To them, in the first instance, all questions about patents would be referred; but in any case of dispute, and the decision of the Board not being satisfactory, it was proposed to carry the matter before the law officers of the Crown. In such cases the law officers would receive the report of the examiners, and the ultimate decision would lie with them. The expense of applications would not be increased in consequence of this arrangement."

We next come to the proposed remedy for one of the great evils of the present system—namely, a proper classification of patents, with a register of these, as well as of inventions, to be open to inspection at any time:—

"At present it often happened that, when a man had devoted his time, his patience, his money, to an invention, and imagined that he was on the eve of reaping the fruits of his labours, he found that some one else had anticipated him, that *a patent was already in force for the particular invention he had made*, and that therefore all his labour and expense went for nought. Now, in order to avoid this, two provisions were introduced into the bill; and it was also provided that, when recourse was had to a court of law, the court entertaining the question should be invested with an equitable jurisdiction, so that a court once seized of the matter would be entitled to decide it on equitable principles, without putting the parties to the expense of further litigation."

To put this in plain English, a man has been hitherto allowed to purchase, under the patent laws, a right *already sold to another*! This has been a fruitful source of litigation, and of consequent ruin to inventors; and, at the same time, a large source of profit to the Patent offices. We are glad to find that this gross injustice will no longer be practised. Any common vendor of property would incur serious legal responsibility by selling the same article to two different purchasers, without giving the last purchaser notice that the right to the property had been already parted with. The patent offices have hitherto been in the position of a proprietor of land who has been allowed, after having sold his entire right to an acre of ground, to re-sell it piecemeal to half a dozen applicants, keeping each in the dark respecting the possession and enjoyment by others! It was thought that justice was fully served if the Government retained the fee of £276 paid in each case, and allowed the patentees to settle among themselves the priority of right, or the extent of their claims! We have always looked upon it as a disgrace to the law whenever, in an action on the infringement of a patent, it could be alleged that the process was not new,

but had been already substantially patented. What is this but an admission that the Government has sold for £276 that which it had previously parted with to another for the same sum? We trust such a plea as this will hereafter never be recorded, and that the production of the patent may be received at once as a proof of novelty and utility.

The new measure provides also for claims to inventions made by foreigners in foreign countries. It is proposed that, if an invention has been practised in a foreign country, that circumstance should be fatal to it here.

"As the law now stood, if a man introduced an invention that was new in this country, he might secure a patent right for it. This was no doubt absurd; but, on the other hand, he thought it wrong to say that, because an invention had been discovered in some remote country, the man whose mind led him to the same discovery here should have no claim to any reward at all. Of the two extremes, he should say that a man who brought an invention into this country should acquire some right in it, but not a right equal to that of the original inventor. He thought, therefore, a middle course should be taken."

The invention of the daguerreotype furnishes an instance of the necessity of this change. The inventor was well remunerated in his own country; but, although he could not hold a patent here, he contrived to hold it vicariously by the aid of some attorney, and to make a profitable sale of it. This system will be hereafter properly abolished.

The new bill has been read a second time in the House of Commons, and we trust nothing will occur to prevent so useful and necessary a measure from being enacted into a law.

Reviews.

Pharmacopœia Collegii Regalis Medicorum Londinensis. 8vo. pp. 196. Londini: apud Johannem Churchill. 1851.

A Translation of the New London Pharmacopœia, including the New Dublin and Edinburgh Pharmacopœias; with a Full Account of the Chemical and Medicinal Properties of their Contents: forming a Complete Materia Medica. By J. BIRKBECK NEVINS, M.D. Lond., M.R.C.S., and L.A.C.; Medical Officer to the West Derby Union Hospital; Lecturer on Chemistry in the Collegiate Institution, and on Botany in the Medical School, Liverpool; formerly Medical Tutor in Guy's Hospital. 12mo. pp. 780. London: Longmans. 1851.

FOURTEEN years having elapsed since the publication of its last Pharmacopœia, the London College of Physicians feels itself called upon to issue a new edition. The principal features of this are very like those of its predecessor. The most important changes are stated in the preface to be—1. The transfer of many drugs from the second part, where they formerly stood among the "*Preparata*," to the first part, where they are now to be found in the list of articles of the *Materia Medica*. This change has been made because it appeared inexpedient to enumerate and describe those drugs which are prepared with great care and accuracy by commercial chemists. Undoubtedly these are universally employed, and it was therefore entirely unnecessary to repeat instructions for their preparation, inasmuch as those for whom this work is more especially destined, have no occasion to follow its directions. The College has, however, thought it desirable to retain the formulæ for the preparation of a few,—*e. g.*, calomel and corrosive sublimate, which being powerful and dangerous remedies, and at the same time not difficult of preparation, it has seemed to the authors advisable that those who may require their use should be able to make them, or to test their purity when procured in the way of commerce.

2dly. Certain new medicines are added, simple as well as compound,

because they appear to have stood the test of long trial.

3dly. The authors state that they have taken considerable pains to point out the characters of the vegetable substances that are used, in order to remove any doubt respecting the particular article where several varieties are included under the same name.

4thly. In changes of nomenclature the compilers have endeavoured to follow rather than to be in advance of science, and have wisely subjoined the former name in every case where a new nomenclature has been introduced.

The difficulty of employing Latin in a description of modern processes is very well illustrated in the subjoined paragraphs:—

e. g. “Cum duo ponderum genere in Angliâ usu recepta sint, quorum altero aurum et argentum, altero cæteræ omnes fere merces æstimantur, nos priore utimur, quod et TROY WEIGHT vocatur.” Or, again, the following on the matter of the *Materia Vasorum*:—“Hæc autem rite vitrefacta habemus, quæ vulgo Anglice PORCELAIN vel STONEWARE nuncupantur.”

Surely no further evidence can be required to show that it is desirable to write English for Englishmen, and not a strange mixture of English and Latin.

We have quoted from the work itself the announcement of the alterations or supposed improvements; of the details thereof we shall reserve our notice to the consideration of Dr. Nevins' translation, which supplies at the same time all the deficiencies—and they are not few—that Pharmacopœias generally possess. The present edition is not singular in the deficiencies and imperfections to which we here refer, and among which we may mention—1. The want of notes accompanying the list of the *Materia Medica* which should briefly indicate the nature and uses of each article. 2. The want of a table of doses, or a statement of the doses of each preparation appended thereto. 3. A supplementary appendix containing short notices of those remedies which the compilers may not consider to have undergone a sufficiently long trial to warrant their introduction into the body of the work.

We have great pleasure in directing our readers' attention to Dr. Nevins' translation, in which they will find

scarcely any trace of resemblance to the work that has been published by the College. That, indeed, has served as a text, upon which Dr. Nevins has enlarged very greatly. As we have done with the Pharmacopœia we shall do by the Translation, and quote from its preface its design, pointing out subsequently its objects, and the mode in which these are carried out.

The primary design of the author has been to place before the medical student a work that should assist him in preparing for his examination. With this view, “he has bestowed more attention upon some points than is usual in works on *Materia Medica*, whilst others he has passed over slightly; to some it may appear, perhaps, too slightly. He has dwelt at considerable length upon the characteristic differences in medicines which are usually associated together under the same head, instead of leaving the student with such imperfect information as his own observation of their peculiar effects enables him to supply.”

With regard to the botany and zoology of various substances, the author has confined himself to mentioning every thing necessary for students in preparing for their examination; “more than this his experience has taught him they never read, if provided.” Certainly on these topics the practitioner will also find as much as he wants for practical purposes; more he can better seek elsewhere. Diagrams are employed to explain the chemical changes described. The properties of each article of the *Materia Medica* are described under its preparations, and a copious index affords every information that may be desired on this point.

We proceed now to place before our readers these works as exhibited in detail.

The first section has reference to weights and measures. The London College retains the same as in 1836. Dr. Nevins dismisses the change introduced by the Dublin College, simply observing that the Dublin College employs Avoirdupois weight, and remarking that “the difference in weight is so small as to be of trifling importance;” from which opinion we take leave to dissent. (See p. 73 of our last vol.)

Dr. Nevins fully explains the differences of the various thermometers, and the means of converting their equiva-

lents; also the manner of taking specific gravities; and gives some tables of different weights and measures.

The second part of each work comprises the MATERIA MEDICA. Instead, however, of a bare enumeration as presented by the Pharmacopœia, with the occasional relief only of a description of the characters by which some few of the drugs may be known, Dr. Nevins arranges the entire Materia Medica in a tabular form, which presents at a glance the name of each article, with the following points of interest connected with each: viz., Scientific name or description, natural order, Linnæan class, Linnæan order, whence obtained, properties, active principle, preparations, description. This is a truly valuable table, and compiled with great care and pains. We here cite an example:—Buchu; *Scientific name*, *Barosma serratifolia* (Wild.), *B. crenulata* (W.), and *B. crenata* (Eckl.). The leaves; *Natural order*, Rutacea; *Linnæan class*, Pentandria; *Linnæan order*, Monogynia; *Whence obtained*, Cape of Good Hope; *properties*, aromatic, tonic in urinary diseases; *active principle*, volatile oil, bitter extract; *preparations*, Infusion (Tinct. D. E.); *description*, Infus. Buchu.

The changes made in the Materia Medica by this edition of the London Pharmacopœia, may be arranged under the two heads of omissions or additions.

The articles omitted in the present, which found a place in the last Pharmacopœia, are:—Acetosella; Acorus; Allium; Althæa, the leaves (for which the root is substituted); Amygdala amara (for which Amygd. dulcis is substituted); Argentum; Asarum; Aspidium; Barytæ carb.; Bergamii oleum; Brominium; Calcis Hydras (for which Calx is substituted); Cardamine; Centaurium; Contrajerva; Curcuma; Euphorbium; Ferri Percyanidum; Lacmus; Malva; Marmor; Marrubium; Menyanthes; Olibanum; Opoponax; Origanum; Porrum; Sabadilla; Simarouba; Sodæ Acetas; Spigelia; Stan-num; Succinum; Testæ; Toxicodendron; Tussilago.

The additions now made to the Materia Medica are, for the reasons already assigned, more numerous in appearance than in reality, many of these articles having formerly been placed among the preparations. Those which now for the first time appear are few in number, and for the most part unimportant.

Thus:—Acidum gallicum; Acid. tannicum; Chloroform; AQUA DESTILLATA; Atrophia; Copaibæ Oleum; Fæniculi Oleum; Morrhuæ Oleum; PANIS (!); Rutæ Oleum; SILEX CONTRITUS (!); VIOLA. Of the drugs here mentioned only one or two enjoy any active properties. Whether, moreover, some of these and others that have been retained might not with great advantage have been omitted or replaced by others of some utility, admits of no doubt. We shall not, however, occupy further space by discussing this point. If the proverb be not true of drugs—"quot homines, tot sententiæ," it is not applicable in any case.

The third section treats of "Preparata et Composita," being Part the Second of Dr. Nevins's work. We shall here simply enumerate those preparations that are new to the Pharmacopœia, and then more fully bring before our readers this the most important and valuable portion of Dr. Nevins's translation; it may, indeed, be regarded as *the book* itself.

The following, then, are we believe all the compounds the formulæ for which are now introduced into this edition of the London Pharmacopœia:—Liq. Ammoniaë Citratis, Atropiæ Sulphas, Liqueur Morphiaë, Liq. M. Hydrochl., Cataplasma Carbonas, Cataplasma Sodæ Chlorinataë, Decoctum Gallæ, Decoctum Pareiræ, Emplastrum Potassii Iodidii, Enema Assafœtidæ, Extractum Pareiræ, Extractum Sarsæ Liquidum, Linimentum Calcis, Liq. Arsenici Chloridi, Syrupus Ferri Iodidii, Ferri Carbonas cum Saccharo, Ferri Ammonio-Citras, Vinum Ferri, Pilula Aloes cum Sapone, Sulphuretum Iodidum, Syrupus Cocci, Tinctura Aconiti, Tinct. Ergotæ Etherea, Tinctura Limonum, Tinct. Lobeliaë, Tinct. Quinæ comp., Unguentum Conii, Ung. Opii, Ung. Potassii Iodidii, Ung. Sulphuris Iodidii.

The therapeutic value of some of these preparations is less apparent than their pharmaceutic utility,—e.g., Syrupus Cocci, Tinct. Limonum.

We must now pass on to notice the far more useful translation of Dr. Nevins.

The consideration of Preparations and Compounds is preceded by a brief account of the Tests that will be found useful in pharmacy.

It would be impossible within the limits of a review to do complete justice

to this work; we must content ourselves with noticing the manner in which the author treats each subject; premising at the same time that the observations and exposition of each quite equal those that have so justly obtained the great celebrity and favour gained by the "Dispensatories" of Duncan, Thomson, and Christison.

In treating each article or preparation, Dr. Nevins first gives the name as contained in the London Pharmacopœia, with its synonymes of the Dublin and Edinburgh Pharmacopœias, and its English Translation. He next gives the formula translated into English, and the directions for preparation given by the College. Then follow the author's comments, and explanations of chemical changes, description of botanical characters, or natural history, with the medicinal properties, uses, doses, antidotes, &c., &c. The latter or original parts are distinguished from those that consist merely of translations, by being printed in a smaller type. The quantity of really useful matter added in this way is very large, and completely supplies the deficiencies of the bare uninformative Pharmacopœia.

We have experienced great difficulty in the selection of an example which should illustrate our remarks upon the author's general treatment of his subjects. Some are too long for our space, others too short to answer our purpose. We have cut the Gordian knot, by taking the first that came to hand on opening the volume:—

"FERRI AMMONIO-CITRAS, *L.D.*

"AMMONIO-CITRATE OF IRON.

"Take of Sulphate of iron, twelve ounces.

Carbonate of Soda, twelve ounces and a half.

Citric acid, six ounces.

Solution of ammonia, nine fluid ounces.

Boiling distilled water, twelve pints.

"Dissolve the sulphate and carbonate, separately, in six pints of water. Mix the solutions while still hot, and set aside that what is precipitated may subside. The supernatant liquid being poured off, wash this frequently with water, and, having added the acid, dissolve it with the aid of heat. Afterwards, when it has cooled, the ammonia being mixed with it, evaporate the solution to the thickness of a syrup; dry this, thinly spread out upon smooth porce-

lain tiles, with a gentle heat. Let it be kept in a well-stopped vessel.

"The Dublin process is similar to this, except that 'the sulphate of iron is to be converted into hydrated peroxide of iron, as directed in the formula for this oxide (see p. 400); and the oxide so obtained is to be dissolved in the citric acid. To the solution, ammonia, in slight excess, is to be added, and the resulting solution is to be evaporated as above.

"*Process.*—In the first part of the London process, carbonate of iron is formed, which ought theoretically to be converted into sesqui-oxide during the washing. (See FERRI SESQUIOX. p. 398.) In practice, however, it remains almost entirely as carbonate; and, if made according to the London directions, the salt is not a citrate of the sesquioxide, but of the protoxide of iron.* The Dublin process is therefore better, as it ensures the iron being in the form of sesquioxide. This oxide, when obtained, is dissolved by the citric acid, which is in a sufficient quantity to form a bicitrate. On the addition of the ammonia, half the acid combines with it and forms the desired salt.

Composition.—Ammonio-citrate of iron consists of

1 eq. of citrate of ammonia, $\text{Am}\overline{\text{C}}$; 1 eq. of citrate of sesquioxide of iron, $\text{FeO}\frac{1}{2}\overline{\text{C}}$; 1 eq. of water = $\text{Am}\overline{\text{C}}, \text{FeO}\frac{1}{2}\overline{\text{C}}, \text{HO}$.

Characters and tests.—It is dissolved by water. The solution does not change the colour of litmus or turmeric, nor does it become blue on the addition of ferrocyanide of potassium; but either potash or lime-water being added, it throws down sesquioxide of iron, and emits ammonia. From 100 grains, dissolved in water, about 34 grains of sesquioxide of iron are thrown down on the addition of potash.

"Ammonio-citrate of iron is not likely to be purposely adulterated, but it may contain an excess of citric acid from careless manufacture, in which case it would redden litmus paper.

"Ammonio-citrate of iron does not crystallise, but it forms minute scales of a brilliant deep red colour, which are easily soluble in water; it has a sweetish, not disagreeable taste. Another preparation, not unlike this, only without ammonia, and termed simply, citrate of iron, was introduced into practice about the same time as this, but it is not so easily soluble in water, and is not now used medicinally.

"*Medicinal properties and uses.*—It is tonic and emmenagogue, like all the compounds of iron, and possesses the advantage of being an elegant, not unpleasant form of

* Mr. Abraham, Chem. Soc. Liverpool.

this remedy. It is used in all the cases in which iron is prescribed, but is especially valuable for delicate women and children, owing to its mildness and the absence of disagreeable taste.

“Dose.—Gr. iv. to gr. xv.”

This example furnishes a fair type of the manner in which the author treats others, though many topics are discussed at much greater length, the explanation of their chemistry, &c., frequently occupying several pages.

An Appendix contains notices of most of those articles that have been excluded from the present edition of the Pharmacopœia, and of several others that are yet waiting the verdict of the profession.

A second Appendix contains an account of the author's experiments relative to the action of water upon lead.

The volume concludes with a “Classification of Remedies,” arranged in a tabular form, and indicating their characteristics, and the most usual occasions for their use.

Two or three words in conclusion. Dr. Nevins has not only undertaken a useful task, but he has ably executed it. We would not inflict upon this book the injury to call it faultless; but we may in fairness affirm that there is no other book at all to be compared with it either in extent or completeness.

A Practical Compendium of the Recent Statutes, Cases, and Decisions affecting the Office of Coroner. By WILLIAM BAKER, Esq., one of the Coroners for Middlesex. 12mo. pp. 702. London: Butterworth. Dublin: Hodges and Smith. 1851.

MR. BAKER's position and experience as a Coroner, in such a populous county as Middlesex, is of itself a sufficient guarantee that the author has opportunity enough of forming an opinion on the duties of the office he holds, as well of expounding the bearings of the statutes having reference thereto, while at the same time the ability, integrity, and impartiality, manifested by Mr. Baker in the discharge of his onerous and anxious duties have been such as to inspire his readers with confidence in the suggestions which he offers on the multifarious topics embraced in the work before us. Among these we may enumerate the following, as having medical interest:—Assault; Burial

Clubs; Drunkenness; Drowning; Board of Health; Hydropathy; Infanticide; Insanity; Homicide; Murder; Manslaughter; Small Pox law; Assault; Ether and Chloroform, &c., &c. Besides these various subjects calling for some knowledge of medical and surgical facts and reasonings, our readers would be surprised on consulting the work itself to see the amount of general information that is required for the efficient discharge of a Coroner's duties. This surprise will, however, disappear when we reflect upon the endless varieties of occupations and conditions of the unfortunate objects of inquests, and the infinite diversities of causes and casualties by which violent or sudden death occurs.

It would be impossible, within our space, to analyse the contents of this manual. Some idea of its comprehensiveness may be formed from its comprising most of the new enactments relating to the poor, to the police in reference to the Coroner's Court, registration of deaths, the powers and enactments of the Board of Health, the laws regarding the removal of nuisances, the prevention of disease, and the suppression of its causes, the circumstances attending railroad and steamboat accidents, collisions, &c., precedents of inquests, and the laws regarding evidence before the Coroner.

The work may safely be asserted to constitute a complete digest of the laws relating to all the above-mentioned circumstances; it will be found of service to the medical practitioner, as well as to the Coroner, affording, as it does, ample information on medical police, and much instruction on various points of medical jurisprudence.

ROYAL COLLEGE OF SURGEONS.

GENTLEMEN admitted members on the 23d inst.:—Messrs. J. D. Tapin—G. W. Nichols—W. Waske—E. Davis—M. L. Burrows—H. T. Howard—F. W. Headland—J. T. Henry—W. R. Woodman—and J. H. P. Oldmeadow.

Admitted on the 25th inst.:—Messrs. F. Pratt—J. Langdon—R. Richards—W. F. Wade—J. H. Aveling—F. Godrich—R. J. Hodges—W. C. Lovell—G. Burnham—D. D. Davis—J. S. Sanderson.

Admitted on the 28th inst.:—Messrs. A. Adey—J. Cronin—H. Bond—D. Leman—C. W. Chaldecott—E. Ashton—W. H. Yates—H. Beresford—H. W. Wood—J. Crawford—and S. Langworthy.

Proceedings of Societies.

ACADEMY OF MEDICINE, PARIS.

July 1, 1851.

The Properties of Conicine.

M. ORFILA stated the results of experiments that he had performed in order to investigate the properties of *Conicine*, the active principle of *Conium maculatum*. Conicine is as active a poison as nicotine; from which, however, it is distinguished by several characters, more especially by its odour, which resembles that of the urine of mice, while nicotine has the odour of tobacco. Conicine is slightly soluble in ether, which dissolves nicotine freely; conicine boils at 100° (212° F.), whilst nicotine requires a temperature of 150° (302° F.) for the production of ebullition. Conicine, M. Orfila found, is absorbed by the principal organs, like nicotine. Lastly, the symptoms of poisoning that it gives rise to are nearly the same. These may be divided into three stages or periods:—the first characterised by vertigo, the second by convulsions, the third by prostration.

July 8, 1851.

A New Mode of Treating Tubercular Ulceration of the Testicle.

An essay was read by M. Malgaigne, in which he described the forms of fungus of the testicle which constitute the variety of disease to which he referred, and related the various modes of treatment adopted by surgeons, concluding by proposing to raise both the integuments and the morbid structures at the same time, penetrating even to the tissue of the testicle, and then attempting to produce union by the first intention. This plan, the author urged, had the advantage over castration that it afforded an opportunity for a portion of the organ to resume its functions at some future time, if any healthy structure at all remained; and if no healthy gland exist, he added, the patient is no worse off, and has not the melancholy knowledge that he has been castrated.

The discussion on Congenital Syphilis was resumed, and extended to a greater length than the limits of our space permit us to reproduce.

Hospital and Infirmary Reports.

HÔTEL DIEU.

A Case of Internal Strangulation, connected with the presence of an Abdominal Tumor. Under the care of M. LOUIS.

UNDER the name of internal strangulation are generally described all complete obstructions to the passage of the excretions, from any cause seated in the intestines themselves; but this definition, however anatomically correct, will be found difficult to recognise at the bed-side. How, for instance, at the outset, can a case of circular strangulation of the intestine be distinguished from the passage of a fold of intestine under a bridle of false membrane, or through an abnormal orifice, or from invagination, or from the compression of a tumor? Clearly the distinction is too often impossible. All that the medical attendant can perceive is that the course of the faecal matters is obstructed,—it may be with or without pain, with or without a tumor, with or without the phenomena of strangulation, and, after a certain time, the occurrence of all those symptoms which prove the existence of an insurmountable obstacle to the action of the bowels. Up to this point the physician is bound to act, and accordingly he does so, as if the case were one that will yield to treatment. If it succeed, he has still the conviction of the uncertainty of his diagnosis; but he has saved his patient's life, and that will more than fully compensate for the want of the satisfaction of, scalpel in hand, verifying his diagnosis.

The following case is one which it is difficult to class. The patient at first presented some of the signs of strangulation: these symptoms yielded to treatment, when an abdominal tumor was detected: this also had partly disappeared, and the patient had left the hospital cured.

CASE.—Abraham Strauss, age 40, a pedlar, entered the Hôtel Dieu on the 17th March, 1851. He was a man of a good constitution, strong, and generally in the enjoyment of good health. Notwithstanding this, he had frequently suffered from severe attacks of colic, during which complete obstruction of the bowels had occurred, and which had usually been followed by a purging. His skin had, after each of these attacks, assumed a jaundiced hue. On the 16th March, at 5 o'clock in the evening, he was seized with acute colicky pains: his bowels had not acted

for two days; he took food at 8 o'clock, and vomited about an hour afterwards. The vomiting returned on the morning of the 17th; on the evening of this day he entered the Hôtel Dieu. A lavement, with 50 grammes (= 12 drachms Eng.) of sulphate of soda was administered, but it returned as it was given. On the following morning the condition of the patient was alarming; his countenance was anxious, of a yellow tint, the eyes having a dark rim round them; profuse perspiration; pulse 96, and sharp; breathing irregular; some thirst, tongue moist, some nausea. To the right of the epigastrium there was some pain on pressure. Beneath the false ribs a tumor could be detected: it was not very distinctly limited, painful on pressure, and dull to percussion. The abdomen was distended; the outline of the convolutions of the intestines could be detected. A dose of castor oil was given, with two drops of croton oil, and forty leeches were applied over the tumor.

In the evening the patient was much the same. Ten centigrammes (= 1.54 grs. Eng.) of tartar emetic were given.

On the 19th his anxiety was much decreased; the pulse 76; the tumor less painful; six stools had taken place; no vomiting. The purgatives and leeching were repeated.

20th March.—The patient felt himself better, and his appetite had returned. The jaundic tint was deeper; the pulse 72; the skin cool; four evacuations from the bowels; the point corresponding to the tumefaction was soft; there was still some pain in the epigastrium. Treatment continued. In the evening acute pain occurred at the umbilicus. Tartar emetic was given.

21st.—The patient had had several stools; did not complain of pain anywhere. The belly soft; pulse 68; tongue clean. Treatment, a simple enema.

22d.—Pulse 76; two stools; abdomen soft; pain at right side of umbilicus, where an ovoid tumor can be detected, its base continuous with the liver. The tumor was painful, and dull on percussion. Treatment, twenty leeches.

A blister was applied; the tumor gradually decreased, all the other symptoms subsided, and the patient left the hospital on the 2d April, with only slight trace of the tumor remaining.

The first idea which this case suggested was that of intestinal invagination. The tumor which was detected in the right hypochondrium revealed, as it decreased, another tumor in the umbilical region. What was this tumor? This question is not easily answered. Was it a distended gall-bladder, occasioned by obstruction to

the passage of the bile? The discoloration of the skin, however, was never more than *sub-icteric*, whereas hepatic colic is attended with complete jaundice. Was it acute or chronic hepatitis? The size of the tumor did not correspond with the supposition of enlargement of the organ from inflammation. An hydatid cyst? The success attending the treatment is opposed to this view. The solution of the question is difficult, and will not be here further attempted.

CLINIQUE DES DEPARTEMENTS.

Case of Traumatic Tetanus—Sulphate of Quinine in large Doses—Cure. Under the care of M. COSTE, Surgeon-in-Chief of the Hôtel Dieu, Marseilles.

CASE.—A boy, aged sixteen, was admitted on the 1st of December, having a slight wound on one of his toes produced by the fall of a keg of water which he was carrying on his head. The wound was dressed with cerate. Several days afterwards tetanus appeared, and followed its ordinary course of, first trismus, then convulsive movements of the face and neck. An active depletive treatment was immediately adopted without any amelioration. At this time M. Foucard, de Pont Ste.-Maxence, had published the successful result of the use of large doses of quinine in similar cases. This remedy was ordered to be given to the exclusion of every other. It was first administered to the patient on the 15th of December, in daily doses of fifteen grains with small quantities of morphia. On the next day an improvement in the symptoms was observed. The dose was increased to fifty grains in a few days, and was again gradually reduced. The patient quitted the Hospital cured on the 12th of January.

The grounds of the administration of this remedy are apparently empirical, but this is the case with many other valuable remedies. The researches, however, of Andral and Monneret go to show that large doses of quinine exert a beneficial influence on rheumatism by diminishing the portion of fibrin of the blood; it is therefore logical to infer that in tetanus a sedative action is exerted on the muscles. In the case now related the only ill effects produced by the large quantities of quinine were slight impairment of vision for a short time, and some degree of tinnitus aurium.

BUTTONS IN THE INTESTINES PRODUCING SYMPTOMS OF OBSTRUCTION. REPORTED BY DR. HOMANS.

A MALE child, aged 14 months, on the 23d of October seemed quite unwell, after passing an uneasy night. There was strong effort at expulsion of matters from the bowels. Under these straining attempts, some fæces passed, without relief of symptoms; pulse accelerated; skin hot; tossing of head, &c.; slight vomiting also occurred; suspicion of intussusception arose. In the night, the above symptoms having been on the increase for twenty-four hours, a teaspoonful of castor oil was given. Through the night severe pain of paroxysmal nature; the intervals marked by perfect ease; the pain being compared by the mother to uterine efforts in parturition. On the following day, the child was much more ill and feverish, and Dr. H. saw it at nine o'clock, A.M.; tenesmus urgent; patient moaning; skin hot; pulse full and quick; a slight discharge of bloody water from bowels. On palpation of abdomen, a hard swelling was detected, about half way between umbilicus and crust of right ilium, of the size of a pullet's egg. On examination by the rectum, a hard mass was discovered, somewhat yielding to pressure by the finger. A large enema was given from a powerful syringe, which was unsuccessful; the fluid being returned before overcoming the obstruction. A second injection was given; in a short time an explosive sound (internal) immediately preceded the discharge of a large lump of solid fæces, pushing before it a small *button*; several dejections followed in quick succession, composed of solid and fluid matters, among which were passed *seven buttons*, made from horn, porcelain, and metal, and varying in size from those used for pantaloons, to the ordinary shirt button. The child was soon relieved, and has been well since. Nothing had passed from the bowels for forty-eight hours previously to the attack.

Dr. Homans remarked that the case was important as illustrating the necessity of accurate diagnosis; several of the distinctive features of intussusception and hernia being present, viz., the discharge of bloody fluid, and the tossing of the head so often noticed in intussusception; while the coldness of the external surface frequently remarked therein, did not exist in this case. There was slight vomiting at first, and likewise the inability of passing fæces, even with violent effort, which might have led to a suspicion of hernia. The detection of a tumor by the finger suggested the use of an enema, as affording a chance for the removal of any foreign body obstructing the intestine.—*American Journal of the Medical Sciences*, April 1851.

BIRTHS & DEATHS IN THE METROPOLIS
During the Week ending Saturday, July 26.

| BIRTHS. | | DEATHS. | |
|-----------|-----|-----------|-----|
| Males.... | 709 | Males.... | 473 |
| Females.. | 674 | Females.. | 483 |
| 1383 | | 956 | |

CAUSES OF DEATH.

| | |
|--|-----|
| ALL CAUSES | 956 |
| SPECIFIED CAUSES | 956 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 282 |
| <i>Sporadic Diseases, viz.—</i> | |
| 1. Dropsy, Cancer, &c. | 31 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 121 |
| 4. Heart and Bloodvessels..... | 26 |
| 5. Lungs and organs of Respiration | 85 |
| 6. Stomach, Liver, &c. | 54 |
| 7. Diseases of the Kidneys, &c. | 16 |
| 8. Childbirth, Diseases of Uterus, &c. | 10 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 6 |
| 10. Skin..... | 2 |
| 11. Premature Birth..... | |
| 12. Old Age | 46 |
| 13. Sudden Deaths..... | 5 |
| 14. Violence, Privation, Cold, &c.... | 28 |

The following is a selection of the numbers of Deaths from the most important special causes:

| | | | |
|--------------------|----|------------------|-----|
| Small-pox..... | 17 | Convulsions..... | 42 |
| Measles..... | 26 | Bronchitis | 40 |
| Scarlatina | 18 | Pneumonia | 32 |
| Hooping-cough | 35 | Phthisis | 141 |
| Diarrhoea..... | 83 | Lungs | 5 |
| Cholera..... | 12 | Teething | 7 |
| Typhus..... | 59 | Stomach | 5 |
| Dropsy | 10 | Liver..... | 10 |
| Hydrocephalus | 24 | Childbirth | 2 |
| Apoplexy | 26 | Uterus | 7 |
| Paralysis | 19 | | |

REMARKS.—The total number of deaths was 72 below the average mortality of the 30th week of ten previous years.

METEOROLOGICAL SUMMARY.

| | |
|--|-------|
| Mean Height of the Barometer | 29.59 |
| Thermometer ^a | 60° |
| Self-registering do. ^b Max. 87° Min. 50° | |

^a From 12 observations daily. ^b Sun.

RAIN, in inches, 2.07.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 1° below the mean of the month. The week was chiefly remarkable for the enormous quantity of rain which fell. It amounted to rather more than *one-twelfth* of the whole annual quantity.

NOTICES TO CORRESPONDENTS.

Mr. R. U. Lawrance.—Inquiry shall be made in reference to the notice of Professor Frieriep's work.

The communications of Mr. Benjamin Phillips and Mr. Hinton, with some others which are in type, will be published in the following number.

We have received two letters this week, the signatures of which it is impossible to decipher, although the writers have evidently made some attempt to give their Christian and surnames. Under these circumstances we can return no answer to the inquiries.

Mr. Balman's paper has been received.

Lectures.

LECTURES

ON

TUMOURS,

Delivered in the Theatre of the Royal College of Surgeons of England.

BY JAMES PAGET,

Professor of Anatomy and Surgery to the College.

LECTURE VI.

Cartilaginous tumours.—General characters and relations, when growing in soft parts, and on or in bones—Microscopic structure—its peculiar diversity, in regard to the basis-substance, cells, and nuclei, in different specimens—deductions respecting “homology” of structure, considered as an indication of the nature of a tumour—their rates of growth—development—degenerations and defects—diseases—varieties of appearance hence derived.

Particular illustrations of cartilaginous tumours connected with the several bones of the limbs, jaws, cranium, spine, and hands, and with the salivary glands—their general nature—occasional recurrence—frequent combination with medullary cancer, and with glandular, fibro-cellular, fibro-plastic, and other growths.

THE name of cartilaginous tumours may be given to those which Müller, in one of the most elaborate portions of his work on Cancer, has named Enchondroma.* Either term will sufficiently imply that the growth is formed mainly of a tissue like cartilage; and I would at once point out the singularity of such tumours being formed, and growing to so great a size as I shall have to describe, although cartilage is not formed for the repair of its own injuries, nor, at least in man, in a perfect manner, for the repair of the injuries of bone.

The cartilaginous tumours are found, in the large majority of cases, connected with the bones and joints.† However, they occur not rarely in soft parts, completely detached from bone. Thus, in the pure

* Other names employed are Osteo-chondroma, Chondroma, Benign Osteo-sarcoma. The term osteo-sarcoma cannot be too entirely disused; it has been more vague than even Sarcoma, having been employed indiscriminately for all tumours, of whatever nature, growing in or upon bones, provided only they were not entirely osseous.

† Those referred to as connected with the joints are the cartilaginous masses that are found pendulous or loose in joints. They have sufficient characters in common with these tumours to justify their enumeration in this list; yet they are in so many respects peculiar, that they would need a separate history.

form, or mixed with other tissues, they are met with in the testicle,* mammary gland,† subcutaneous tissue,‡ and lungs,§ and in the soft parts near bones; but among all the soft parts their favourite seat appears to be the neighbourhood of the parotid gland. The greater part of the solid tumours formed in this part have more or less of cartilage in them.

Cartilaginous tumours that are connected with bones may occur in two distinct positions—namely, within the walls, or between the walls and the periosteum: very rarely, they grow in both these positions at once. When they are within the bones they are isolated and discontinuous, and are surrounded by the walls, which may be extended in a thin shell or capsule of bone around them, or may be wasted and perforated by them.* When they grow outside the bones they are generally fastened to the subjacent bone-wall by outgrowths of new bone; the periosteum, greatly overgrown, invests them, and prolongations from it towards the bone appear to intersect them and divide them into lobes. When they grow among soft parts they have a well-formed fibro-cellular or tougher fibrous capsule, which is commonly more dry and glistening than that of most innocent tumours.

In any of these situations, cartilaginous tumours may be either simple or complex, conglobate or conglomerate, if we may adopt such terms; i. e., they may be composed of a single mass without visible partitions, or of numerous masses or knots clustered, and held together by their several investments of fibro-cellular tissue. According to these conditions, they present a less or more knotted or knobbed surface; but in either state they affect the broadly oval or spheroidal shape.

To the touch, cartilaginous tumours may be very firm or hard, especially when they are not nodular and their bases are ossified. In other cases, though firm, they are compressible, and extremely elastic, feeling like thick-walled tensely-filled sacs. Many a solid cartilaginous tumour has been punctured in the expectation that it would prove a cyst.

The knife cuts them crisply and smoothly,

* Mus. Coll. Surg., Nos. 2384-5-6; Mus. St. Bartholomew's Hosp. ser. 28, No. 17, and Appendix; and several in the Museum of St. Thomas's Hospital. See also Mr. Gamjee's Pamphlet, On a case of Ossifying Enchondroma in the Testicle of the Horse.

† Astley Cooper, Diseases of the Breast, p. 64; Müller, On Cancer, p. 149, No. 13, from a dog; Mus. St. Bartholomew's, ser. 34, No. 13, from a bitch.

‡ Rokitansky, Pathol. Anat., B. i. p. 261; Lebert, Abhandlungen, p. 195.

§ Mus. St. Bartholomew's, Pathol. Appendix; Rokitansky and Lebert, l. c.

and their cut surfaces present, in the best examples, the characters of foetal cartilage, —bright, translucent, greyish-, or bluish-, or pinkish-white, compact, uniform. Usually each separate mass or lobe is without appearance of fibrous or other compound structure; but sometimes the cartilage looks coarsely granular, as if it were made up of clustered granules. This is, I think, especially the case in the inclosed cartilaginous tumours of the hands and fingers, especially in such of them as are soft. In other cases, when the cartilage is very firm, it may be opaque or milk-white.

In different examples of cartilaginous tumour there are great varieties of consistence or firmness. Some appear almost diffuent, or like vitreous humour; some are like the firmest foetal cartilage; but, with the exception of the cartilaginous growths that are pendulous or loose in joints, I have never seen any present such hardness, dulness, or yellowness, as do the natural adult cartilages of the joints, ribs, or larynx.

As, in all appearance, the material of these tumours, in its usual and most normal conditions, is identical with foetal cartilage, so is it, I believe, in its development, and, as Müller has shown, in its chemical characters.* The microscopic characters, also, of cartilaginous tumours agree, speaking generally, with those of foetal cartilage; yet there are several particulars to be observed concerning them, and especially the diversity of form and arrangement that may be seen in the microscopic constituents of even different parts of the same tumour.

This diversity of microscopic forms is enough to baffle any attempt to describe them briefly, or to associate them with any corresponding external characters in the tumours. The most diverse forms may even be seen side by side in the field of the microscope. But this diversity is important. It has its parallel, so far as I know, in no other innocent tumour; and the cartilaginous tumours form the single exception to a very generally true rule enunciated by Bruch† — namely, that it is a characteristic of the malignant tumours, and a distinction between them and the innocent, that they present, even in one part, a multiformity of elementary shapes.

The diversity of microscopic characters extends to every constituent structure of the cartilage in the tumours. I will state the general and chief results of the examinations of fifteen recent specimens of

which I have lately made notes and drawings.*

(a.) In regard, then, to the basis or inter-cellular substance—(1) It is variable in quantity, the cells or nuclei lying in some specimens wide apart, in some being closely crowded; (2) it varies in consistence with all the gradations to which I have already referred; (3) and in texture, in some specimens it is pellucid, hyaline, scarcely visible; in some dim, like glass breathed-on; in many more it is fibrous in texture or in appearance: indeed, most cartilaginous tumours might deserve to be called fibro-cartilaginous. It is seldom, and, I think, only in the firmest parts or specimens, that the substance between the cartilage-cells has the strong hard-lined fibrous texture which belongs to the chief natural fibrous cartilages; yet it has generally a fibrous texture. The fibres are, or appear, usually soft, nearly pellucid, and very delicate; sometimes they appear tufted or fasciculate; sometimes they encircle spaces that contain each a large cartilage-cell, or a cluster of cells or nuclei; sometimes they form a fasciculated tissue in which cartilage-cells lie elongated and imbedded: most commonly of all, I think, they curve among the cells, as if they were derived from a fibrous transformation of an intercellular hyaline substance.

(b.) Yet greater varieties may be found in the characters of the cartilage-cells.† (1) In plan of arrangement they may be irregularly and widely scattered, or closely placed, or almost regularly clustered with fibrous tissue encircling them. (2) In individual cells there are varieties of size from $\frac{1}{700}$ th to $\frac{1}{1500}$ th of an inch. (3) And there are yet more varieties of shape; some have the typical form of healthy preparatory cartilage-cells, being large, round, or oval, or variously shaped through mutual pressure, faintly outlined, with single nuclei, and clear contents; and some are like normal compound cartilage-cells. (4) But, with various deviations from these more normal characters, some cells have hard dark outlines; and some are bounded by two, three, or four dotted or marked concentric circles, as if the cell-walls had become laminated; others appear without

* These are exclusive of specimens of loose cartilages in joints; of which, indeed, no account will be given in this lecture.

† I retain this name, although the observations of Bergmann (*De Cartilaginibus*, 1850) and others show that it is difficult in some cases to determine the nature of the *cell-contents*, and that they may resemble cells rather than nuclei. Taking as the type of cartilage-cells the elements of the chorda dorsalis, I think we shall least often err, if we keep the term *cell* for those elementary structures in other cartilages which are most like the cells of the chorda, in their fine clear outline and the pellucid or dim space just within, or, also, just without it.

* The enchondromata of bones; he says, always yield chondrin; while those of soft parts may yield either gelatine or chondrin (On Cancer, p. 124). The whole account of their analyses is very ample.

† Die Diagnose der bösartige Geschwülste.

any defined cell-walls, as if they were mere cavities hollowed out in the basis-substance; and, in other instances, the cell-walls and their contents, down to the nucleus, appear as if they were completely fused with the basis-substance, so that the nuclei alone appear to be imbedded in the hyaline or dimly fibrous material. These last two states appear to be connected with very imperfect development or with degeneration; for I have seen them, I think, in only very soft cartilage, or in such as showed other distinct signs of degeneration. In many such cases, also, the nuclei are so loosely connected with the basis-substance, that large numbers of them float free in the field of the microscope.

(c) The varieties of the nuclei in the cartilage of tumours are not less than those of the cells. (1). Some are like those of the normal cartilage—round or oval, clear, distinctly outlined, with one or two nucleoli. (2). But some appear wrinkled or collapsed, as if shrivelled; some contain numerous minute oil-particles, representing all the stages to complete fatty degeneration; and the formation of granular bodies; some are uniformly but palely granular, like large pale corpuscles of lymph or blood; some are yet larger, nearly filling the cells, pellucid, like large clear vesicles with one or more oil-particles enclosed; and some have irregularities of outline, which are the first in a series of gradational forms, at the other extremity of which are various stellate or spicate corpuscles.

Now I have not been able to discern any constant rule of coincidence between any one of these forms of nuclei and any of the forms of cells, nor between either and any of the enumerated appearances of the intercellular or basis-substance. All modes of combinations have appeared among them; only, on the whole, the completely developed cells have the best nuclei, and the degenerate or imperfect of both are usually in company.

The last-named nuclei, with irregular outlines, deserve a more particular description, both because they are, so far as I know, found in no normal cartilage in any of the vertebrata, and because their imitating, in some measure, the forms of bone-corpuscles might wrongly suggest that they have an important or a constant relation to the ossifying process.

They were first described, I think, by Müller; and have since been noticed in cartilaginous tumours by Mr. Quekett, and many others. I have examined them in six cases; and, to show that they are not peculiar to one form of cartilaginous tumour, I may add that, of these six, one was a great tumour encircling the upper

part of the tibia, one a growth on the last phalanx of the great toe, one a mixed tumour in the articular end of the fibula, and three were mixed tumours over the parotid or submaxillary gland.

The phases of the transformation by which they are produced appear to be, that a nucleus of ordinary form, or with one or more oil-particles, extends itself in one or several slender, hollow, and crooked processes, which diverge, and sometimes branch as they diverge, towards the circumference of the cell. Such nuclei may be found within the cells, or within cavities representing cells whose walls are fused with the intercellular substance; but much more commonly, it appears as if, while the nuclei changed their forms, the cells and the rest of their contents were completely fused with the intercellular or basis-substance, so that the nuclei alone appear imbedded in the hyaline or pale fibrous substance. Moreover, although, at first, as we may suppose, the nuclei, as they send out their processes, may retain the round or oval form of their central parts or bodies, yet they afterwards lengthen and attenuate themselves, so as to imitate very closely the shapes of large bone-corpuscles; or they elongate and branch, or shrivel up; and in these states, lying in groups, they have the most fantastic appearances. In these various states the nuclei are often only loosely connected with the basis-substance; so that they are easily removed from it, or are found floating on the field of the microscope.

Now, as I have said, corpuscles like these occur in no normal cartilage yet examined in man or any of the vertebrata. If, then, heterology of structure were indicative of malignancy, the tumours that contain these corpuscles should certainly be malignant; but there is no single fact to make it probable that they are so, and every presumption is in favour of their being all as innocent as the tumour on the great toe in which I found them.

The only natural cartilage yet known as possessing these corpuscles is, I believe, that of the cuttle-fish; and it is at least interesting, and it may be importantly suggestive, to observe that the morbid structure, deviating from all that is natural in its own species, conforms with that of a much lower creature.

As to the meaning of these changes of the nucleus,—some like these may be preparatory to ossification, and the metamorphosis of the cartilage-nucleus into a bone-corpuscle; but I believe all I have myself examined were degenerations without reference to ossification. We may believe the nuclei to be changed by a process of degeneration on many grounds; such as

(a) the fact already mentioned of their likeness to the nuclei of lower cartilages; (b) their likeness in shape to ramified pigment-cells and bone-corpuscles which have probably lost all power for their own nutrition; (c) the frequent coincidence of more or less fatty degeneration in the nuclei thus changing; (d) the usual coincidence of the fusion of the cell-wall and contents with the basis-substance of the cartilage, and the loosening of the nuclei; (e) the gradual shrivelling or wasting of the nuclei after the assumption of the stellate form.*

Such is the anatomy of cartilaginous tumours; and now, in relation to their physiology, several points may deserve notice.

Their rate of growth is singularly uncertain. They may increase very slowly. I have seen one not more than half an inch long which had been at least four years in progress. Or, after a certain period of increase, they may become stationary; as often happens in the tumours that occur in large numbers on the hands. Or, from beginning to end, their growth may be very rapid. I remember a man, about 40 years old, in St. Bartholomew's Hospital, in whom, within three months of his first noticing it, a cartilaginous tumour increased to such an extent that it appeared to occupy nearly the whole length of his thigh, and was as large round as my chest. He had a pale unhealthy aspect, and suffered much from the growth; and its size and rapid growth, the tension nearly to ulceration of the skin over it, the enlarged veins, and loss of health, made all suppose it was a great malignant tumour. Mr. Vincent, therefore, decided against amputation of the limb, and the patient died exhausted within six months of the appearance of the disease. The examination after death proved that a great cartilaginous tumour, with no appearance of malignant disease, had grown within and around the middle two-thirds of the femur. The bone, after extension by the growth within it, had been broken, and all the central part of the tumour was soft, nearly liquid, and mixed with fluid blood and decolourised blood-clots.

In another case, lately under Mr. Lloyd's care, a cartilaginous tumour sur-

rounding the upper two-thirds of a girl's tibia grew to a circumference of two feet in about 18 months. Gluge* also mentions a case in which, in a boy 14 years old, a cartilaginous tumour on a tibia grew in 3½ months to the size of a child's head, and protruded, and caused such pain and hectic, that amputation was necessary.

I need only refer to the importance of these cases in their bearing on the diagnosis of tumours, and as exceptions to the general rule that the malignant grow more rapidly than the innocent.

In extent of growth, the cartilaginous tumours scarcely fall short of the fibrous. Mr. Frogley† has related two cases of tumours of enormous size. In one, the patient was a young woman 28 years old, and the tumour, of nearly five years' growth, around the shaft of the femur, extended from the knee-joint to within an inch of the trochanters, and measured nearly three feet in circumference. It is a pure cartilaginous tumour, but its whole central part is soft or liquid, and many of the nodules of which it is composed have the character rather of cysts, through such central softening as I shall presently have to describe. The limb was removed near the hip-joint, and the patient has remained in good health for seventeen years since.‡

In the other case, by Mr. Frogley, the patient was a lady 37 years old, and the tumour had been growing eleven years; it was 20½ inches in circumference, and exactly resembled that in the former case. The amputation of the limb was equally successful.

The tumour in Mr. Lloyd's case, to which I have just referred, measured 24 inches in circumference. But all these are surpassed by an instance related by Sir Philip Crampton, in which a tumour of this kind, surrounding the femur, and soft in all its central parts, measured no less than 6½ feet in its circumference.

The only change of cartilaginous tumours which can be spoken of as a development, is their *ossification*.

So far as the process is concerned it is, I believe, an imitation of the ossification of the natural cartilages; and Mr. Quekett has, I believe, observed in such tumours all the modes of ossification observed in normal bones, and even more than these; the diversities of modes of ossification seeming to be not less than those of the elemental forms of cartilage.

But the more general or larger method

* Mr. Quekett has seen the ossifying process ensuing in the substance between the stellate nuclei, and gradually enclosing them, so that they assume the appearance of bone-corpuscles. I have not yet seen this; but his authority is sufficient for proof of the fact. The occurrence of ossification with characters of a process of degeneration is quite consistent with what is known of the histological relative positions of cartilage and bone: see Lectures on Repair, Lecture IV.

* Pathologische Anatomie, Lief. iv.

† Medico-Chirurgical Transactions, vol. xxvi.

‡ I have to thank Mr. Frogley for affording me this information, and Mr. Lane for an opportunity of exhibiting at the Lecture the remarkable specimen obtained by the operation.

of ossification must be observed. Ossification may ensue, I suppose, in any cartilaginous tumour; but it is rare or imperfect in those that grow within bones, and is yet more imperfect, and is like the deposit of amorphous calcareous matter, in those that lie over the parotid gland.* It is best seen in those that lie upon or surround the bones; and in these, two methods of ossification may be noticed.

In one method, the ossification begins at the surface of the bone, where the cartilaginous tumour rests on it, and thence the new-formed bone grows, or, as it were, shoots, into the cartilage. Thus, the ossification may make progress far into the substance of the cartilage; and the tumour may appear like an outgrowth of bone covered with a layer or outer crust of cartilage, on which the periosteum is applied. Or, extending yet further, the cartilage may by this method be wholly ossified, and the cartilaginous may be transformed into an osseous tumour.

In the other method of ossification, the new bone is formed in the mid-substance of the cartilage. In a large tumour this may commence at many points, and, from each extending, the several portions of new bone may coalesce with one another, and with that formed in the first method like an outgrowth from the surface of the original bone. Indeed, this twofold method of ossification is commonly seen in the large tumours that surround long bones.

The ossification ensuing in several points, and thence extending, is plainly, in these tumours, an imitation of the natural ossification of the skeleton from centres in each of its constituent parts. Sometimes, indeed, this natural process is imitated with singular exactness. Thus, we have here a portion of a large tumour which was taken from the front of the lumbar vertebræ of a soldier.† Half of it is cartilaginous, and half is medullary cancer. The cartilaginous portion consists of numerous small nodules, of various shapes, each of which is invested with a layer of fibro-cellular tissue, as its perichondrium. In many of these, a single small portion of yellow cancellous bone appears in the very centre, each nodule ossifying from a single nucleus or centre as orderly as each cartilage of the foetal skeleton might ossify.

I shall speak in the next lecture of osseous tumours, and, among them, of those that are formed by these methods. It may therefore suffice, for the present, to say that, in nearly all cases, the bone formed in cartilaginous tumours consists of cancellous tissue, with marrow or medullary substance in its interspaces; and that when

the ossification of the tumour is complete, the new cancellous tissue is usually invested with a thin compact layer or outer wall; and, if the tumour have grown on a bone, becomes continuous with the cancellous tissue of that bone.

The principal defect or degeneration noticeable in cartilaginous tumours is manifest in their being extremely soft, or even liquid,—a clear, yellow, jelly-like, or synovia-like material appearing in the place of cartilage. I call it a defect or a degeneration, because it is not always certain whether it is the result of cartilage, once well-formed, having become soft or liquid, or whether the soft or liquid material be a blastema which has failed of gaining the firmness and full organization of cartilage. The condition in which it is sometimes found can leave little doubt, I think, that it is often a degeneration,—a liquefaction of that which was once more perfectly nourished; but in other cases we have no guide to its interpretation, and it is quite probable that the same defective structure would be found in arrests of development as in degeneration.

But leaving this doubt, and passing to the mere description of these soft or softened cartilaginous tumours, I repeat that the soft material is like gradually melting, transparent, yellowish jelly, or like a gum-like substance, or like honey, or synovia, or serum. Such a material may occupy the whole interior of a cartilaginous tumour, one great cavity, filled with it, being found within a wall of solid substance.* Or the whole mass of a tumour†, or its exposed surface‡, may be thus soft or liquid. Often, too, we may trace in individual nodules of a cartilaginous tumour, a process of what I suppose to be central softening, by which, perhaps, the formation of the great central cavities of the large tumours is best illustrated. Thus, in the tumour of cartilage and medullary cancer, of which I have already spoken, as illustrating the process of ossification from a centre in each nodule, there are many nodules, in the centres of which, instead of bone, small cavities full of fluid are seen. So, too, in a large cartilaginous tumour, growing on the pelvic bones of a man 40 years old, a portion of which was sent to me by Mr. Donald Dalrymple, I found a large number of distinct nodules, each with a central cavity full of honey-like fluid: and the state of the cartilage around these cavities, its softness, the fusion of its cell-

* As in Mr. Frogley's case; and as in many nodules of the tumours, No. 217 and others, in the Museum of the College of Surgeons.

† See a drawing of one in the hand, and a specimen in Ser. I. 115, in the Museum of St. Bartholomew's.

‡ Mus. Coll. Surg., No. 206.

* Mus. Coll. Surg., No. 204.

† Mus. Coll. Surg., No. 217.

walls, and their contents, with its hyaline basis, and the sparing distribution of nuclei in it, make me believe that the softness and liquefaction were the results of a degenerative process*. It is often very difficult to say to what the softness or fluidity of these tumours is due. In some cases, it appears connected with their great bulk, and the hindrance to the sufficient penetration of blood to their central parts. Hence, it is, I think, proportionally more frequent in the large than in the smaller tumours. In some cases it may be due to exposure of the tumour, as in the instance of a great cartilaginous tumour, which grew from the sacro-iliac symphysis and adjacent bones, and projected into the vagina of a woman 34 years old.† But in many more cases we are wholly unable to assign a reason for such softness.

The central softening of single nodules of cartilaginous tumours may extend to the formation of cysts; for when the whole of a nodule is liquified, the fibro-cellular investment may remain like a cyst enclosing the liquid. This change is also shown in the same tumour as illustrates the central ossification and the central softening; and it was not difficult to trace in it what appeared like gradations from central to complete liquefaction, and from a group of cartilaginous nodules to a group of cysts with tenacious fluid contents. It is to be added that the softened central parts of cartilaginous tumours are apt to be affected with rapid sloughing or suppuration. Such an event occurred in Sir Philip Crampton's case already quoted, and in one presenting many features of great interest which was lately under Mr. Lloyd's care at Saint Bartholomew's Hospital‡. A girl, 14 years old, was admitted with a very large tumour round the upper two-thirds of the tibia. It had been growing or 18 months, and, shortly before her admission, without any evident cause, the integuments over it began to look inflamed and dusky. The limb was amputated almost immediately after her admission, and the tumour presented in its interior a large cavity with uneven broken walls, filled with brownish serous fluid of horribly offensive putrid odour. The inner surface of the walls of the cavity appeared also putrid, and gases, the products of the decomposition, were

diffused in the cellular tissue as far as the middle of the thigh.

Other changes of a degenerative character may be sometimes observed in cartilaginous tumours. Parts of them may appear grumous, or pulpy, and of an ochre yellow colour*. This is probably a fatty degeneration of their tissue. And, sometimes, as I have said, their ossification is so imperfect as to be more like a fatty and calcareous degeneration, in which their substance becomes like fresh mortar, or soft chalk, and is powdery, and white, and greasy†.

It may serve for additional illustration of this general pathology of cartilaginous tumours, if I describe now some particular forms of them.

I have said that they affect particularly the bones. The bones of the hands are their most frequent seats, and next to these, the adjacent extremities of the femur and tibia, the parts which, for some inexplicable reason, appear to have in all the skeleton the least power of resistance of disease. After these, the humerus, the last phalanx of the great toe, the pelvis, and the ribs, appear most liable to cartilaginous growths; and after these, the number of cases is as yet too small to assign an order of frequency, but there is scarcely a bone on which they have not been seen.

Of the cartilaginous tumours of the large long bones I need say little, having drawn from them the greater part of the general description. Only, the relations of the growths, according to the part of the bone in or near which they lie, may be worth notice.

When, then, the tumour grows at or about the articular end of a large long bone, it is almost always placed between the periosteum and the bone. Here it usually surrounds the bone, but not with an uniform thickness; and the thin wall of the bone wastes and gradually disappears as if it were eroded, or as if it changed its form, becoming cancellous, and then growing into the tumour, as I have already described. I have never seen such a tumour encroaching on the articular surface of a bone. But it may grow up all about the borders of the joint and surround them. A striking example of these relations of the cartilaginous tumour to the bone on which it grows is in one of the finest specimens in the Museum,‡ a cartilaginous tumour of the humerus, removed in an amputation at the

* When extensively softened, the cartilaginous tumours are very like masses of alveolar or gelatiniform cancer, and I believe have been often described as such. I think, too, that some of them are included by Vogel in his group of "gelatinous tumours" (Gallertgeschwülste), of which he says gelatiniform cancers are the most frequent form.

† Mus. Coll. Surg., No. 206.

‡ It is fully reported in the *Lancet*, Dec. 1850. The specimen is in the Museum of the Hospital.

* Mus. Coll. Surg., No. 200.

† Mus. Coll. Surg., No. 204. Rokitansky, B. I. p. 262. Mr. Humphry has particularly described this change, *Lectures*, p. 142.

‡ Mus. Coll. Surg., 779. The patient recovered from the operation, but died two months afterwards with disease of the chest.

shoulder-joint by Mr. Liston. The patient was a Naval surgeon, and the tumour had been growing for nearly forty years. The mass it now forms is nearly ten inches across; it surrounds the upper three-fourths of the shaft of the humerus, and nearly surmounts its articular surface. The abundant isolated nodules, the partial central ossification and central softening, the growth of bone from the cancellous tissue of the humerus into the tumour,—all these, and many other of the general statements I have made, are here well shown.

It is extremely rare, I think, for a cartilaginous tumour to grow within the articular end, or in the medullary tissue near it, in a large long bone. Here is, however, a striking specimen presented by Mr. Langston Parker to Mr. Stanley. It was removed by amputation of the lower part of the leg, from a young gentleman in whom it had grown slowly, and had distinctly pulsed. The lower end of the fibula is expanded and wasted by a growth of cartilage, mixed with what appears to be fibro-plastic tissue. The growth is rather larger than an egg, and is invested by the remains of the expanded fibula, and by the periosteum; and the relations of the chief blood-vessels make it probable that the pulsation felt during life must have been derived from that of the vessels within the tumour.*

When a cartilaginous tumour grows at the middle of the shaft of a large long bone, it is, I think, usual to find coincidently both an external and an internal growth. Cartilage lies outside the shaft, beneath the periosteum; and another mass may fill the corresponding portion of the medullary canal. Then, in the concurrent growth of the two masses, the wall of the bone between them wastes or is broken up, and they may form one great tumour set between the ends of the shaft. These are the cartilaginous tumours which most imitate the progress of malignant disease. They are indeed very rare; but the chance of the existence of such an one where we might be anticipating a malignant tumour, is always to be added to the motives for amputation in cases of tumours round the shafts of these long bones.†

* The specimen is in the Museum of St. Bartholomew's Hospital. No. 783 in the Mus. Coll. Surg. is an ossified cartilaginous tumour within the upper end of the fibula. In the Museum of St. Thomas's Hospital is a most remarkable instance of cartilaginous tumours growing, at once, in the scapula, the upper part of the humerus, and the lower part of the same. In the last-named part the cartilage lies within the thinned walls of the bone. The case is described by Mr. William Adams in the Proc. of the Pathol. Soc., vol. ii.

† A specimen of this form is in the Museum of St. Bartholomew's, in and upon a femur; in Ser. i. No. 111; and one of very large size, around and

When cartilaginous tumours grow at the attachment of tendons (and they often do so, especially about the lower part of the femur), they are peculiarly apt to acquire narrow bases of attachment. In these cases one usually finds a layer of cartilage incrusting some cancellous and medullary bone, and the bone, narrowing itself, extends into continuity with the wall or the cancellous tissue of the subjacent shaft. Such tumours have, then, the characters of polypoid outgrowths from the bone, and may be treated accordingly; for, when cut or broken off, their stems (at least, if they consist of only bone) will not grow. Indeed, this stem may chance to be unwittingly broken, as in a tumour* removed by Mr. Lawrence. It had grown on the inner and lower part of the femur, and, when fairly exposed, was easily detached without further cutting: the narrowest part of its stem rested in a slight depression in the femur, but had no connection by tissue with it. It seemed as if the narrow pedicle of a tumour, so large as this was, had been by accident broken off, and that friction of the broken surfaces had smoothed and fitted them together.

Such are some of the chief facts to be noted about the cartilaginous tumours on the large long bones.

On the jaws these tumours are, I believe, very rare. I know but one specimen on the upper jaw alone,—a great tumour, portions of which are preserved in the Museum of Guy's Hospital, and of which the history, by Mr. Morgan, is in the Hospital Reports.

On the lower jaw such tumours appear prone to acquire a peculiar shape, affecting the whole extent of the bone. One of the most remarkable tumours in the Museum of the College‡ is of this kind. The patient was a lady thirty-nine years old. The tumour had been growing eight years; it commenced as a small hard tumour just below the first right molar tooth, and gradually enlarged till it enclosed the whole jaw, except its right ascending portion. It measured two feet in circumference and six inches in depth, and the patient died exhausted by want of food, which she was unable to swallow, and by the ulceration of parts of the tumour during the last two years of her life.

M. Lebert‡ has recorded a case in which a tumour like this was removed by Dieffen-

in the upper third of the femur, is in Guy's Hospital Museum, 1160, 86. One also is mentioned by Mr. Hawkins as occurring in the middle of the shaft of the humerus (MEDICAL GAZETTE, vol. xxv. p. 476.)

* Mus. St. Bartholomew's, Ser. i. 183.

† No. 1031 and 201.

‡ Abhandlungen, p. 198.

back. In three successive operations he removed it by instalments, and the patient finally recovered.

The cartilaginous tumours that grow about the cranial bones and the vertebræ show, in a marked manner, that reckless mode of growth (if I may so speak) which is more generally a characteristic of malignant tumours. They grow in every direction; pressing, and displacing, and leading to the destruction of, important parts, and tracking their way along even narrow channels.

Here, for example, is a tumour,* composed, for the most part, of cartilage, which grew in connection with the bones of the face and head of a lad sixteen years old. It involved both superior maxillary bones, extended into the left orbit, and through the left side of the base of the skull into its cavity, compressing the anterior lobes of the cerebrum: it was also united to the soft palate, and protruded the left nostril, and the integuments of the face.

The commencement of a similar growth is probably shown in a specimen,† in which, together with changes effected by the growth of nasal polypi, one sees the ethmoid cells completely filled with firm semitransparent cartilage, a mass of which projects in a round tumour into the upper part of the left nasal fossa.

And here I may adduce, in proof of the tracking growth of the cartilaginous tumours, the case of one‡ originating in the heads of the ribs, which extended through the intervertebral foramina into the spinal canal, where, growing widely, and compressing the spinal cord, it produced complete paralysis of the pelvic organs and the lower extremities.

The cartilaginous tumours of the hands deserve a special notice.

As many, I believe, as forty cases might be collected from various records, in which the bones of one or both hands, and sometimes of the feet also, have been the seats of numerous cartilaginous tumours. Several of these cases were collected by John Bell;§ many more by Müller,|| who drew, indeed, from these cases the greater part of his

general account of enchondroma; and many more might now be added to the list. I have here four admirable specimens of the disease, besides several in which single bones of the fingers are the seats of similar tumours.

The first of these, in the Museum of the College,* from the collection of Sir Astley Cooper, consists of the amputated fingers and heads of the metacarpal bones of a girl 13½ years old. Tumours had been growing in these bones for eleven years, and now there are eleven or twelve, from half an inch to an inch and a half in diameter, and all formed of pure cartilage.

The second was presented to the Museum of St. Bartholomew's by Mr. Hodgson.† It comprises the right hand, and the little finger of the left hand, of a lad 14 years old, in which, without any known cause, tumours had been growing from early childhood. In the right hand the metacarpal bone of the thumb contains two tumours; that of the fore finger three or four tumours, of which the smallest is an inch, and the largest is three inches in diameter: the first and second phalanges, also, of the fore finger contain tumours; the middle finger appears normal; the third finger has one tumour in its metacarpal bone, one in its first phalanx, and two in its second phalanx; the little finger has as many in corresponding positions. On the left hand the only tumour was that in the first phalanx of the fore finger.

A third preparation‡ contains the fore and little fingers removed by Mr. Lawrence from a healthy lad seventeen years old. He had on his left hand four, and on his right hand six tumours; but those that were removed were alone troublesome and increasing. They varied from one inch and a half to one-third of an inch in diameter, were all covered with healthy smooth skin, and appeared to grow from the interior of the bones. No account could be given of their origin: they began to grow when he was five years old, and some grew more quickly than others. It will be seen that in both fingers the formation of cartilage in the metacarpal bones and the second phalanges is scarcely attended with any swelling: indeed, till the operation was being performed, they were not supposed to be the seats of disease, though their medullary cavities are quite full of cartilage.

The fourth specimen is, I believe, the most remarkable yet seen. I received it yesterday from Mr. Salmon, of Wedmore. It is the right hand of a labourer, fifty-six years old, from whom, when he was sixteen

* Mus. St. Bartholomew's Hospital, Ser. xxxv. No. 47. Drawn in Mr. Stanley's Illustrations of Diseases of the Bones, pl. xiii. fig. 4.

† Mus. Coll. Surg. 2199.

‡ Mus. St. Bartholomew's Hospital, Ser. i. No. 115.

§ Principles of Surgery, vol. iii. p. 65.

|| On Cancer. Whenever the statements made by Müller, respecting the general characters of these tumours, differ from the account here given, the differences may, I think, be explained by his taking for the type the tumours of the hand. This alone could have made him regard so little the ossification of cartilaginous tumours.

* No. 778.

† Described in the Pathological Appendix to the Catalogue.

‡ Mus. St. Bartholomew's, Pathol. Appendix.

years old, the fore finger of the left hand was removed with a tumour weighing 2lb. 5oz. The little finger of the same hand has a tumour about as large as a walnut: the whole length of his left tibia has irregular nodules on its anterior and inner surface, and some enlargement exists at his left second toe. On the right hand there are tumours on every finger, and one spheroidal mass nearly six inches in diameter, in which the second and third fingers appear completely buried, the walls of their phalanges being only just discernible in the mass that has formed by the coalition of tumours that grew within them.

To these I may add an illustration from Professor Gluge's Pathological Anatomy, in which he represents, from the museum of Professor Vrolik, the hands of a young man, nineteen years old, in which tumours had been growing since the age of two years. On the left hand the tumours are, one in the metacarpal bone of the first, and one in that of the second finger; two in the phalanges of the second, and two in those of the third; and one in the first phalanx of the fourth finger. On the right hand there are tumours in the metacarpal bone and all the phalanges of the fore finger, in the metacarpal bone of the second, and in the phalanges of the third and fourth fingers.

The disease which these specimens illustrate begins, I believe, exclusively in the early period of life, during childhood, or at least before puberty, and sometimes even before birth. It occurs, also, much more frequently in boys than in girls. One or more, or nearly all, of the phalanges or metacarpal bones of one or both hands, may enlarge into an oval, or round, or cordate swelling, enlarging slowly, and without pain. When such swellings are grouped, they produce strange distortions of the hands, making them look like those of people who have accumulated gouty deposits, or, as John Bell delights to repeat, like the toes and claws of sculptured griffins. They may greatly elongate the fingers, but they more commonly press them asunder, limiting and hindering their movements.

There is no rule or symmetry observed in the affections of the hands, except that the thumb is less frequently than the fingers the seat of growths.

In the large majority of cases, if not in all, each tumour grows within a bone, the walls of which are gradually extended and adapted to its growth. And this position within the bones is the more remarkable, because, in the cases of single cartilaginous tumours of the fingers or hands, the growth takes place not more, but rather less often, within than without the bone; these single

tumours commonly growing, as those of the larger long bones do, between the periosteum and shaft.*

Thus, growing within the bones, the cartilaginous tumours may be sometimes found, even in the same hand, in all stages of growth. One phalanx or metacarpal bone may have its medullary cavity full of cartilage without any external appearance of enlargement; another may be slightly swollen-out at one part, or in its whole periphery; another so extended on one side, or uniformly, that its walls form only a thin shell around the mass of cartilage; in another, the cartilage may have grown out through holes absorbed in the walls of the bone, and may then have spread out on its exterior; while from another it may have protruded through apertures even in the integuments, gradually thinned and ulcerated:† or, as the specimen from Mr. Salmon shows, we may find not only such a protrusion through integuments, but two originally distinct tumours, growing out beyond the limits of their respective bones, and coalescing in one huge mass. In cases of this kind, the cartilaginous mass in each bone usually appears as a single tumour, with very delicate, if any, partitions. It may have a coarsely granulated aspect, but it is rarely divided into distinct nodules, or strongly intersected. Its exterior is adapted closely to the interior of the shell of bone, but is not continuous with it, except by blood-vessels. It rarely ossifies, except in a few small scattered cancellous masses in its mid-substance.‡ And it is worth observing, that the tumours often project on only one side of a bone; for, when this happens in the metacarpus, it is often very hard to tell which of two adjacent metacarpal bones should be cut-out in case of need.

The cases of this singular disease have shown great diversity as to the course of the tumours, and in their modes and rates of growth,—some making progress, some remaining stationary; and I believe it has often happened that at the time of manhood all have ceased to grow. But in regard to all these questions, important as they are, we are yet in need of facts.

It would be easy, and as vain as easy, to speculate on the meaning of such a disease as this. I believe no reasonable explanation of it can as yet be more than guessed at.

* Mus. Coll. Surg. No. 772-3.

† A good case illustrating the last-mentioned fact is represented by Professor Müller, in his Principles of Surgery, p. 179. The tumour on the back of the metacarpus weighed fourteen pounds, and after protrusion bled frequently. John Bell also has recorded several such cases.

‡ Specimens of ossification are in the College Museum, No. 785-6.

The only remaining instances of cartilaginous tumours to which I shall refer are those that grow near the parotid, or, much more rarely, near the submaxillary gland.* Some of these are formed of pure cartilage, and might be taken as types of the cartilaginous tumour; but more are composed of cartilage variously mixed with other tissues, and especially with what appears to be an imperfect or a perverted glandular tissue. Whichever of these forms they may have, they are commonly imbedded in the gland. They are sometimes wholly surrounded by the gland-substance, but much more commonly are more or less deeply imbedded in it, and covered with its fascia.

These tumours are generally invested with tough fibro-cellular capsules, which, though sometimes loose, are more commonly so closely attached to the surrounding parts that it is difficult to dissect them out. And the inconvenience of this is not a little increased by the frequent contact of branches of the facial nerve, which are apt to adhere very closely to the deep part of the tumour, or to be imbedded between its lobes, or may even stretch over its surface.†

The general aspect of these tumours depends much on the proportion in which the cartilage and their other component tissues are mixed. When they are of pure cartilage, or when the cartilage (or rather the delicately fibrous cartilage) greatly predominates, they may present all the general characters that I described. Such a case is illustrated by that to which, among all the specimens of the kind, the primary belongs. It was removed by Mr. Hunter, and is enough to prove the skill and boldness as an operator which some have denied him. The case was that of a man, thirty-seven years old, who, sixteen years previously, fell and bruised his cheek. Shortly after the injury, the part began to swell, and the swelling regularly increased for four or five years, when he again fell and struck the swelling, which, after this, extended, especially at its lower part and base. It seemed quite loose, and moveable without pain. Mr. Hunter extirpated it, and with

complete success. It weighed 144 ounces, and measures in its chief dimensions 9 inches by 7. It presents a striking instance of the conglomerate cartilaginous tumour, consisting of numerous round masses of pale, semi-transparent, glistening cartilage, connected by their several fibro-cellular investments; and its exterior is deeply lobed and nodulated. Its apparent composition is confirmed by the microscopic examinations of Mr. Quekett,* who found it composed of cartilage, in which some of the intercellular substance is homogeneous, and some finely fibrous.

But when in these tumours the cartilage is equalled or exceeded in quantity by the other tissue of which they may consist, we may find the same oval and nodular or lobed form, and the same hardness or firmness and elasticity, but they will appear, on section, opaque white or cream-coloured, and less glistening than cartilage.† Generally these mixed tumours appear uniform; but sometimes portions of purer cartilage are imbedded in the mixed tissue, and obscurely bounded from it.‡

In microscopic characters the cartilaginous part of these tumours has, I believe, no peculiarity; different specimens may offer all the variety of forms to which I have already referred. The tissue mixed with the cartilaginous is at present, I think, of uncertain nature. In five cases I have found it, for the most part, present a lobed and clustered structure, with fibrous-looking tissue encircling spaces that are filled with nuclei and cells. These enclosed spaces look so like the acini of a conglomerate gland, that they seem to confirm the opinion one might form from its general aspect—namely, that it is an imitation of gland-tissue. And this is confirmed by the character of the cells within the seeming acini; for they are usually small, round or oval, flattened, dimly granular, with large pellucid nuclei with nucleoli; and they have the general traits of gland-cells. They lie either like a thin epithelial lining of the spaces I just mentioned, or else they are clustered within them; or they may be irregularly grouped through the whole substance of the tumour; and in all cases abundant free nuclei like their own are mingled with them.§

* These are grouped by Rokitansky as the third variety of the Gelatinous Sarcoma, with a recognition of their affinity to Enchondroma. Mr. Syme names them "Fibro-cartilaginous Sarcoma" (*Principles of Surgery*, vol. i. p. 89). The first good description of them was given by Mr. Lawrence (in his paper on Tumours, already often quoted). Mr. Caesar Hawkins described them, for the most part, as "conglomerate tumours."

† The imbedding of important parts in a cartilaginous tumour need be remembered. In the Museum of St. George's Hospital is a specimen of this kind, about seven inches in diameter, which was sent to the museum with the history, that, in removing it from the deep tissues of the thigh, the femoral artery was cut across when passing through its substance.

* *Histological Catalogue*, vol. i. p. 3, Ag. 52.

† They are among the tumours which one finds described as like turnips or like potatoes.

‡ I have often endeavoured to see whence this mixture of tissues results, and especially whether the one tissue is transformed into the other; but I have not been able to discover this. Rather, I believe that these tumours may have been in the first instance composed wholly of one of the two principal tissues, and that in their further growth this primary tissue is superseded by the other.

§ Such are the most general characters of these cells; but they are apt to vary from them, being

In general history, especially in their slow and painless growth, the absence of any morbid influence except that produced by pressure, on the surrounding parts, the absence of proneness to foul ulceration, and of tendency to return after removal; in all these, the tumours over the parotid agree, I believe, with the other forms of cartilaginous tumours. I will therefore not delay to relate cases of them, but will draw towards conclusion by referring to some points connected with the general history and nature of the cartilaginous tumours.

First, then, concerning their origin:—They begin, in a large majority of cases, in early life; between childhood and puberty. Yet they may begin late in life. I saw one on the hand which had been of no long duration when it was removed from a man 70 years old; another, growing in the humerus, and described by Mr. W. Adams,* had grown quickly in a man of 61; another began to grow at the same age, in a woman's thumb.†

Then, concerning their nature; they may be regarded as usually completely innocent tumours, and yet there are some cases recorded in which we must believe that after a cartilaginous tumour has been removed, another has grown in the same place. I saw one such in a woman 30 years old, in whom, soon after the removal of one tumour from the parotid region, another grew, and acquired a great size. This was an unmixed cartilaginous tumour, and I believe the first was of the same nature. Dr. Hughes Bennet‡ has related a case in which Mr. Syme removed a cartilaginous tumour of the arm, by amputation at the shoulder-joint. Subsequently, the patient, a girl 14 years old, died with tumours in the stump and axilla. Mr. Liston removed a portion of the scapula, with a great tumour in its spine and acromion, which I have no doubt is a soft cartila-

more angular, or bearing processes, or being attenuated or caudate. Even if we may consider them as imitating gland-structures, yet it may be a question whether they are related to the adjacent parotid gland, or to lymphatic gland. It might be easy to discriminate between the elements of the parotid and of a lymphatic in their natural state; but a morbid imitation of either of them may deviate far enough to be as much like the other. And it is well to remember that these tumours have exactly the seats of naturally existing lymphatic glands, and are often closely imitated by mere enlargements of these glands; so that, possibly, future researches may prove that they are cartilaginous tumours growing in and with a lymphatic gland over or within the parotid or submaxillary gland.

* It is in the College Museum, No. 781.

† Lebert, *Abhandlungen*, p. 191.

‡ On Cancerous and Cancroid Growths, pp. 108 and 258.

ginous tumour.* Three years afterwards the patient died, with what is described as a return of the disease. Mr. Fergusson showed at the Pathological Society a fibro-cartilaginous tumour† of the lower jaw, which had grown twice after the complete removal of similar tumours from the same part. In the Museum at Guy's Hospital also, there is a cartilaginous tumour growing from the angle of the lower jaw into the mouth, which is said to have grown after complete removal of a similar tumour with the portion of lower jaw to which it was connected. Lastly, Professor Gluge‡ records two cases in which we must believe that recurrence of cartilaginous tumours ensued after complete removal. In one, a cartilaginous tumour, of 13 years' growth, and 9½ pounds weight, over a man's scapula, clavicle, and neck, returned in the ribs, and destroyed life in a year and a half. In another, a similar tumour of the orbit returned two and a half years after removal.

We must conclude, I think, from these cases, that, although the general rule of innocence of cartilaginous tumours is established by their usual history, by numerous instances of permanent health after removal, and by cases in which, after death, no similar growths are found in lymphatics or internal organs, yet recurrence after operations may ensue. And I think that when this happens it will generally be found that the recurring growths, if not the original growths also, are soft, rapid in their increase, and apt to protrude and destroy adjacent parts; as if we had again in these an instance of that gradual approximation to the completely malignant characters of which I spoke in the last lecture.

In connection with this point I may also refer to the following facts in the pathology of cartilaginous tumours,—namely, first, that many may exist in the same person; secondly, that they are sometimes hereditary; thirdly, that they are not unfrequently mingled with malignant growths.

Multiplicity is sufficiently marked in the cases of the hands and feet, but has been observed, though more rarely, in other parts; as in a case recorded by Mr. William Adams, and already referred to as presenting tumours at once in the scapula and parts of the humerus.

The hereditary occurrence was observed in the case of a cartilaginous tumour of the pelvis, of which I have already spoken as examined by Mr. Donald Dahrymple. The patient's father had a large ossified

* It is in the College Museum, No. 781.

† Mr. Simon examined it with the microscope, and found it formed of well-marked cartilage, with a fibrous basis.

‡ *Atlas der pathologischen Anatomie*, Lief. iv. and *Pathologische Histologie*, p. 67.

enchondroma of the radius, which was removed by Mr. Martin.*

The conjunction of cartilaginous and medullary cancerous tumours may, perhaps, be called frequent, especially in the testicle. A man, 38 years old, was under Mr. Lawrence's care with an apparent enlargement of one testicle, which he ascribed to a blow received 18 months previously. Three weeks after the blow he noticed an enlargement which regularly increased, and formed an oval mass about 4 inches long. This, at its upper part, was moderately firm and elastic; but in the lower third it felt incompressibly hard. It was removed, and proved to be a pale, soft, greyish, medullary cancer in the testicle, having in its lower part a mass of cartilage, with scattered points of bone, and some intercellular tissue.† The patient died a fortnight after the operation; and it was interesting to observe, as illustrating the contrast between the cartilaginous and the cancerous growths, that he had soft medullary cancerous tumours in the situation of his lumbar lymphatic glands, but no cartilaginous tissue in or mingled with them.

A specimen closely resembling this, and with a very similar history, is in the Museum of the University of Cambridge. Another is in the Museum of Guy's Hospital, of which it is said that the patient died with return of the medullary disease. Müller noticed the same combination.‡ Virchow§ has cited two cases, and described one, all illustrating the same singular fact. In the three specimens that I have seen of conjunction of cartilaginous and medullary growths in the testicle, the cartilage appears as an isolated mass in the substance of the medullary tumour, and is enclosed in a distinct capsule. There are other cases, however, in which the two morbid substances, though distinct, yet lie in so close contact, that they are confused with one another. Thus, in a tumour which was attached to the front of the lumbar vertebræ, and weighed thirteen pounds, half is formed of soft flocculent medullary substance, and half of nodules of cartilage, some with soft, some

with osseous, centres.* A tumour removed from over a woman's parotid gland by Mr. Lloyd, is invested by a single fibro-cellular capsule; but one half is cartilaginous and the other looks like medullary substance, and they are mingled, with no distinct boundary line at their contiguous borders.† And lastly, in a case of which preparations are in the Museum of St. Thomas's Hospital, Mr. Dodd removed a genuine and apparently unmixed cartilaginous tumour from a man's ribs; but in three months another tumour appeared in the same part, formed of closely mingled cartilage and medullary substance. This quickly proved fatal.

I need hardly remark on the bearing which this last case may have on the question of the recurrence of cartilaginous tumours, and on that of the changes of character which may ensue in tumours generally, at their successive occasions of recurrence. It gives to all these cases a much higher interest than would attach to them if regarded only as rarities and strange things.

But it is not with the malignant diseases alone that cartilage is found in tumours. I have described it as combined with what appears like glandular tissue in the tumours over the parotid, and I have seen bone in similar combination in a tumour in the lip. In the College-Museum are specimens of closely grouped nodules, and irregular masses of pure white cartilage, imbedded in fibro-cystic tumours in the testicle;‡ and more numerous specimens of the same kind are in the Museum of St. Thomas's Hospital. In speaking of the fibro-cellular tumours, I mentioned two in which cartilage was similarly mingled with their more essential constituent; and in the Museum of Guy's Hospital is a tumour removed from beneath the gastrocnemius muscle, which consists of both fibro-cellular and adipose tissue, with abundant imbedded nodules of cartilage. And, lastly, similar combinations appear to exist of cartilaginous with fibro-plastic growths. Such is, I believe, the composition of three tumours in the Museum of St. Bartholomew; of which one surrounds the head of the tumour;§ another involves the bones of the face, and extends into the cranium;|| and a third occupies and expands the lower end of the fibula.¶

* The specimens are in the Museum of the Norfolk and Norwich Hospital. In the number of the Edinburgh Monthly Journal for the present month, an abstract of the case is published by Mr. Cobbold, who relates in addition to the facts I had learnt from Mr. Thomas Crosse, that a brother of the man who had the tumour in the pelvis has mollities ossium, and that "others of his kindred had been subjected to the debilitating influences of a perverted nutrition."

† The specimen and drawings are in the Museum of St. Bartholomew's. Microscopic examinations were made of the diseased parts.

‡ On Cancer, p. 185.

§ Verhandl. der phys.-med. Gesellschaft in Würzburg. Vol. i., p. 134. 1850.

* Mus. Coll. Surg. 207; Mus. St. Bartholomew's, Ser. 35, No. 49.

† Mus. Coll. Surg. 207 A.; Mus. St. Bartholomew's Ser. 35, No. 45. The patient was alive at least seven years after the removal of the tumour.

‡ No. 2384; and others not yet described.

§ Series i. 41. And Mr. Stanley's Illustrations, pl. 13, fig. 4.

|| Ser. 35, 47., and the same Illustr., pl. 14, fig. 3.

¶ Presented by Mr. Langston Parker, but not yet described.

In all these facts concerning its combination with other morbidly produced structures, there must be something of much importance in relation to the physiology of cartilage; but as yet, I believe, we cannot comprehend it. Such combinations are not, I believe, imitated in the cases of any other structures found in tumours; even those that are thus combined with cartilage, do not, I think, combine with one another, if we except the cases of intra-uterine morbid growths; but, as yet, the interest that belongs to all these inquiries is only the interest of mystery and promise to future investigators.

PUERPERAL FEVER—UNUSUAL SYMPTOMS.
BY DR. STORER.

DR. STORER stated that, as several puerperal cases had occurred since the last meeting, he would refer to one which fell under his treatment. On the 9th instant, he was called to a lady, thirty-five years of age, in labour with her third child; she was delivered after six hours' pain. The first three days she convalesced as well as after either of her previous accouchements. On the morning of the fourth day, he learned she had had a restless night, and had had three dejections. When he saw her, she had no pain in the abdomen, and felt no uneasiness upon pressure being made there; the pulse but slightly accelerated; she complained only of an *urgent disposition to stool*. Her mother then told him that, for several weeks previous to her confinement, she had suffered from a *diarrhœa*, for which she was unwilling to take any medicine. Dr. S. ordered an opiate injection and demulcent drinks, by which she seemed relieved towards night. On the morning of the 5th day, complaining of *some pain upon pressure* over the uterus, she was leeches, and minute doses of calomel and Dover's powder were administered. She was relieved by the leeches, but her aspect was bad: the breathing was not much embarrassed; the pulse only 100, and she was not very restless. On the morning of the sixth day, the pain returned in the abdomen, accompanied with slight fulness there; a *blister* was ordered. On the 7th, pain much relieved; irritability of bowels lessened, but still *uneasiness* continued; she seemed much exhausted and depressed; continued medicine. On the 8th, *milk and lochia* suppressed for the first time; great prostration; abdomen more full, but still slight complaint upon pressure. On 9th day after delivery, died. Was conscious throughout the whole of her sickness, and for several days continued to apply her child to the breast.—*American Journal of the Medical Sciences*, April 1851.

Original Communications.

CASES OF
INTESTINAL OBSTRUCTION.

BY BENJAMIN PHILLIPS, ESQ. F.R.S.,
Surgeon to the Westminster Hospital.

THE following cases of intestinal obstruction are recorded for the purpose of illustrating the difficulties of the diagnosis of the *causes* of the mischief.

Before long I propose still further to illustrate the subject, and to make some suggestions which I would fain hope may be useful to those who have the charge of such cases.

A Case of Pure Ileus — Operation —
Death—Post-mortem examination.

A. W., a cabinet maker, aged 50, applied to me under the following circumstances:—He stated that he had had a sense of pain and tightness around the lower part of the chest, with some nausea, for several days. The tongue was pretty clean, the pulse quiet, the bowels somewhat irregular in their action. He was rather a gross feeder, but a perfectly sober man. I ordered for him Hydrarg. Chloridi, gr. iv.; Ext. Coloc. Comp., gr. v.

Two days afterwards I saw him again, when he was somewhat relieved. The medicine had produced three small stools on the morning after it was taken; still there was nausea, and some sense of oppression about the chest. I directed him to repeat the dose, and to take a castor oil draught in the morning.

In two days afterwards I saw him again. He expressed himself as somewhat relieved, but his discomfort was not got rid of. He had had two scanty stools from the medicine. The tongue was clean, and the pulse was quiet. On this occasion, upon carefully exploring the epigastrium, the hand came in contact with a small umbilical tumour, which he said had existed long, and was unheeded. There was no tenderness upon pressure of this tumour, neither was there impulse communicated by coughing; the abdomen in other respects was natural. In this state the patient continued for ten days, the bowels acting scantily when medicines

were administered by the mouth; and during that time there was no abdominal tension or tenderness: the tongue was clean, the pulse was quiet, but the nausea persisted.

On the afternoon of the twelfth day from my first seeing him I was sent for in haste. I found that he had had a violent "convulsive attack," from which he continued to suffer for more than an hour, and that a large stool had been passed involuntarily during this time. He was quite recovered from the attack when I saw him. He still complained of sickness, and the tongue was slightly coated, but the abdomen was perfectly free from tympanitis or tenderness.

I now felt it my duty to ascertain whether there was any mischief at the umbilicus. I cut down upon it, and I found that the tumour which had been observed there was formed by a small pellet of omentum, tightly bound and adherent, but exhibiting no sign of damage from constriction. With some difficulty I enlarged the umbilical opening, and passed my finger into the abdomen to satisfy myself that all was free; but I could not, without more dissection than I thought prudent, return the omentum into the abdomen. I saw him again in the evening: the sickness still persisted, the abdomen was still flat and free from tenderness. I ordered that he should have a castor oil enema early next morning.

When I saw him again I found that the injection had brought nothing away with it that the sickness still persisted, that there was a good deal of borborygmus, that the abdomen was still flat and painless, that the pulse was 80, and that a great deal of water had been passed. I ordered Hydrarg. Chloridi, gr. x.; Opii, gr. ij. statim; Olei Ricini, Sp. Tereb. aa. ʒj. pro enema, post horas quatuor.

The next morning I found he had had some sleep; but the sickness and borborygmus persisted; the abdomen was still soft and flat, and not tender, but there had been no stool. I ordered that the calomel and opium should be repeated.

It now became a question whether any further exploratory operation should be performed; and on this subject I had the advantage of a consultation with Mr. Arnott, who came to the conclusion that there was no clear indication for such a proceeding. We agreed

to continue the calomel, omitting the opium. Ordered to have Hyd. Chlor. gr. ij. 3tiis. horis.

He died the next day.

The body was examined twelve hours after death: Mr. Arnott was present.

The abdomen was by no means tumid; the parietes were very fat. When the flaps were laid aside, the contents of the cavity were found well covered by omentum, in which there was much fat.

The mesentery was edged, as it were, by something which bore a considerable resemblance in colour and size to a large earthworm: we found this to be the small intestine shrunk up to the size of narrow tape, and it had a pink colour. It was carefully followed until we arrived in the left hypochondrium, when the shrunken character ceased, and was succeeded by a brown dilated portion of the same tube. The point where this sudden change took place was 3 feet 9 inches from the duodenum. The appearance there was not unlike that of the appendix vermiformis and the cæcum.

A portion of intestine, including some inches above and some inches below the shrunken portion, was removed from the cavity, examined carefully externally, and no pathological structural change was apparent; some water was poured into it, and the whole shrunken portion at once resumed its ordinary diameter. The other portions of the canal, as well as the other abdominal organs, were in a healthy state.

Obstruction dependent mainly on an abnormal direction of the intestinal canal.

E. N., aged 22, was in his usual health on Thursday. About twelve o'clock, as was his custom, he took some bread and cheese, of which, particularly of the latter, he ate heartily. Not long afterwards he began to complain of a griping pain in his stomach and bowels, of which, however, he made light. He attributed it to the cheese he had eaten: and though it recurred at short intervals, he did not suffer it to interfere with his duties. At five o'clock, his dinner-time, he did not appear at table; he remained in his bed-room lying down, and complaining of a great deal of pain, which he referred to the stomach. He still said it must be the cheese which distressed him. The medical man who saw him prescribed an emetic, but before it could be procured he made him-

self sick by irritating the fauces with his finger. He took the emetic, however, and brought up from the stomach a very large quantity of what seemed, in great part, to be undigested cheese; he was relieved, and it was hoped that the cause of his trouble was removed. In half an hour, however, he complained that the pain had become much more violent at the same spot, and it was accompanied by violent though ineffectual efforts to vomit. The pain occurred in paroxysms, which were succeeded by periods of perfect ease.

There was no tenderness on pressure anywhere. He could not be made to swallow anything, because of the great irritability of his stomach. A few grains of calomel were laid upon his tongue, but it excited new efforts at vomiting, and the stomach could not be quieted; meanwhile the intensity of the abdominal pains increased. He was continually turning from side to side, occasionally writhing with agony, much in the way of a man having violent colic. Warm fomentations, and subsequently a warm bath, were tried, but without benefit.

In an hour or two the pain became more extended; it seemed to take the course of the descending colon, and to lessen at the point it first occupied, as if it was occasioned by an irritant which was passing along the large intestine. At length the pain became more fixed and continuous in the left iliac fossa, and it continued there through the remaining course of the affection. A dozen leeches were applied to that point, and an injection of 40 drops of *Liquor Opii Sedat.* was thrown into the rectum. Shortly afterwards he obtained ease; the vomiting ceased, the paroxysms of pain abated, and he fell into a quiet sleep.

On the following morning (Friday) he looked and thought himself better. The whole abdomen was not altogether free from pain, and there was a very slight amount of tenderness. The patient was very anxious that the bowels should be evacuated, as he thought that then all would be right. The stomach was still somewhat irritable, but he thought he could keep down some medicine. A saline purgative draught was given, and was immediately rejected. Soon after, upon the patient expressing his belief that he could retain pills, ten

grains of compound extract of colocynt and a drop of croton oil were given him, but were not long retained. By two o'clock he had become much worse, and it was at this time I saw him. He had been vomiting very recently, and there was increased abdominal pain. I found, distinctly marked, upon the surface of the abdomen, below the umbilicus, the course of a coil of intestine across the abdomen, together with general and considerable tension. The tongue was covered with a buff slimy coat; the pulse was frequent, but compressible.

It was determined to let the stomach quiet, merely exhibiting a little hydrocyanic acid: emollient injections were thrown into the intestine. In the evening the pain was more severe; the skin was hot, the pulse was 112 and wiry; the tenderness in the left iliac fossa was more acute. Blood was taken from the arm to the extent of 18 ounces with some relief; it had a tolerably thick buffy coat. Calomel, two grains, opium half a grain, to be taken every three hours.

Saturday morning early, the pain became more severe, and it was more aggravated by pressure. There was also more general distress. 30 leeches were applied to the abdomen, and with much though not lasting relief. In addition to the pills, it was now determined that mercurial ointment thickly spread on lint should be laid over the abdomen. The distension and pain increased; no sleep was obtained, and there was no evacuation of the bowels.

The right side and upper region of the abdomen were now most distended; the left iliac fossa was the seat of most pain. There being no appearance of mercurial action in the system, the calomel was increased to three grains every three hours.

Towards evening he suddenly complained of more violent pain than he had yet felt. The breathing was irregular, the heart's action flagged, the pulse was extremely feeble, the temperature of the surface fell, he was covered with cold sweat, and the patient thought himself dying: stimulants were given, and he gradually rallied, but the restlessness increased. An injection was administered, and brought away only some small pellets of faecal matter.

The night was passed with more rest

essness and urgent distress. In the morning there was a slight remission in the distress for a while, but there was more abdominal tension; the pulse was very feeble, and often very rapid; the tongue was dry, and slightly brown, and there was no mercurial action set up. The day was passed much in the same state, and the night was unpromising.

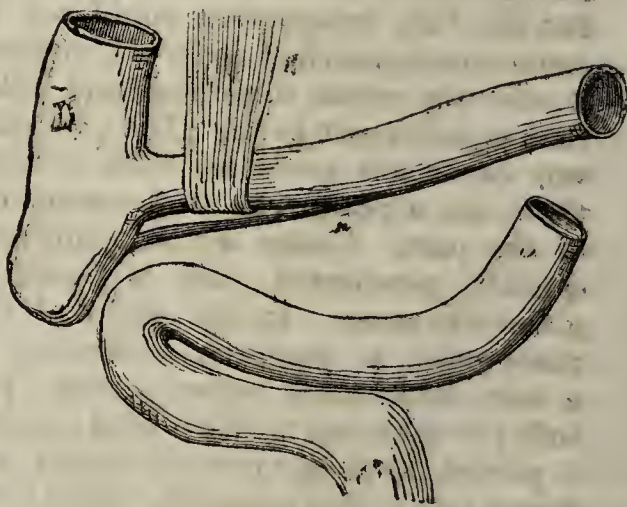
On the morning of Monday there was not much change. The day passed much as the last, but in the evening he was much excited. There was some delirious dreamy excitement, and the opium was suppressed under the idea that it might be probably producing this effect.

Tuesday morning, at five o'clock, a considerable quantity of faecal matter was evacuated. It contained two or three hard pellets, which resembled plum stones, and a lump or two of excessive hardness. Soon afterwards there was another small evacuation. The prostration, however, was very great, though there was a temporary mitigation of the symptoms. The abdomen for a while was less tumid, there was less tenderness, but there was a failing irregular pulse. Instead of sleep there was soon more agitation, there was more abdominal distension, the breathing was occasionally laboured, any portion of the surface when exposed became quickly cold. Towards night the exhaustion increased; a blackish fluid was vomited. He died at half-past two o'clock on Wednesday morning.

Post-mortem examination.—The abdominal cavity alone was examined. On exposing the contained viscera, the small intestines were observed to be distended to nearly twice their natural diameter throughout their entire length, with the exception of the last inch or two of the ileum. They were universally inflamed, and glued together by recent lymph. The omentum was spread out as usual over the small intestines, but at its lower part it was drawn into a band of about two inches in width. This band of omentum passed down in front, then under and behind the ileum, close to its termination in the large intestine. The band then became adherent to the posterior layer of the mesentery, and to the posterior abdominal wall. Thus a partial stricture was formed on the ileum

within an inch of its termination. On one side of the constricting band the intestine was distended, on the other it was not of its natural size. The constricted portion of the intestine was neither thickened nor sloughy. It was inflamed, and adherent to the band of omentum by recent lymph, and would readily have admitted of the passage of the finger. The appendix cæci vermiformis was longer than natural, about five inches in length, and one-third of an inch in diameter. When laid open and spread out it measured an inch in width.

The first three inches of this large appendix formed several doublings or convolutions, which were connected to each other and the coats of the cæcum by five old adhesions, the last two inches of the appendix being alone free. This free portion was situated just below the constricted ileum; it was sphacelated, and contained two little oval bodies, resembling in form and colour small cherrystones, but which on being broken proved to be calcareous concretions. Below the constricted ileum and loose sphacelated appendix was situated another fold of intestine adherent to the cæcum. This was found to be the sigmoid flexure of the colon, which was traced from the left side across the upper part of the sacrum, to the right iliac fossa. Here attaching itself to the cæcum, it was reflected upon itself to the centre of the sacrum, the two folds being adherent. From thence it passed downwards to form the rectum.



Partial Obstruction dependent probably upon Adhesion.

Augusta Barrett, ætat. 50, was admitted into Sanctuary Ward, suffering from abdominal pain. She stated, that

five days before, while reaching for something from a clothes line, she felt something give way in the groin, and she found a swelling there. A year before, a somewhat similar tumour was observed there, but after a time, and the use of frictions, it subsided. At that time the bowels were for two or three days obstinately confined, and since that time they have been occasionally troublesome. At the latter end of December they were confined, but they were made to act on the 29th: they were not again opened until the 1st of January, the day on which she "*overreached*" herself. From that time until the time of her admission the bowels had not been relieved.

She was admitted at 11 o'clock, A.M. Her countenance was anxious; pale, and dejected; her tongue was dry and brown; her skin hot and parched; respiration hurried; pulse 90. There was a prostrating pain in the abdomen, increased by pressure, and there was frequent vomiting of a green bilious matter.

There was an oblong irregular tumour in the right groin, which felt like an omental hernia. It could not be reduced upon pressure, nor was any impulse communicated to it by coughing. The taxis was carefully applied to it, but it was not reduced. Her condition did not admit of delay. A consultation was held, and although there was some difference about the seat of protrusion, there was none as to the necessity of immediate operation.

I commenced the operation by making a longitudinal incision over the tumour; but the thin integument could not be conveniently pinched up for the purpose; it was somewhat thickened, and adherent to subjacent parts. The operation was cautiously proceeded with, because there was a peculiarity in the condition of the part. Under the integument I quickly penetrated into a hardened gland-like mass. In the centre of this mass was a purulent collection of a very foetid dark brown colour: probably over an ounce of this fluid escaped. I passed my finger into the cavity, and found that it had a smooth lining membrane. The tumour had by this time much lessened in bulk. After a careful search, I could find no indication of any abdominal protrusion; the operation was therefore not carried further. She was a good deal relieved by the operation. She was ordered Calomel, gr. v.;

Opium, gr. ss.: to be followed, after four hours, by Magnes. Sulph. $\mathfrak{z}\text{j}$. Aq. Menthae, $\mathfrak{z}\text{j}$., every two hours. Between 9 and 10 o'clock, P.M. she had two good stools, and another during the night, and in the morning was in every way much more comfortable. Her countenance was more cheerful; there was no sickness; little abdominal tenderness; tongue improved. The improvement proceeded steadily from this time. The bowels required very little assistance; the abdomen felt natural; her wound was granulating healthily; her appetite was good; her countenance was cheerful. On the 14th day (Jan. 20) a feeling of sickness returned, with shivering; the bowels did not act as usual, and the countenance assumed an anxious appearance; the pulse was only 76, but the tongue had a yellowish slimy coat upon it; the abdomen was not swollen nor tender.—Ordered Hydr. Chlor. gr. iv. statim; Magnesiæ Sulph. $\mathfrak{z}\text{j}$.; Aquæ, $\mathfrak{z}\text{j}$. 4tis. Enema Terebinthinæ hora somni. There was so much prostration that it was necessary to give her a little brandy occasionally. There was frequent vomiting.

The next morning there was a feeling of heat at the wound, and upon examining it a bright yellow fluid in small quantity was found escaping from it. It was quite liquid, and evidently bilious, and there had been two stools. The face was flushed; the skin hot; the eyes sunken; the pulse 110; but little abdominal pain or tension, though there was stercoraceous vomiting.

24th.—Her state was more hopeless, and on the 25th she died.

Post-mortem examination.—The body was examined about twelve hours after death. Rigor mortis was fairly established, but was very moderate. The body was not at all emaciated; the skin was very sallow; the abdomen was moderately full, but not tense; the sides of the chest were much flattened, and the lower ribs were pressed downwards as if by stays. A wound with inverted edges, and discharging a bilious-looking matter, appeared in the right groin. Upon a careful examination of the surface, no tumour, nodule, or irregularity, could be felt by the fingers. The body was opened by the usual straight incision from the top of the sternum to the pubis. A cross incision was made from the umbilicus to the right crest of th

ilium, and the flap turned back so as fairly to expose the parts in situ.

Upon examining the contents of the cavity, the intestines appeared to lie in their natural position; but the edge of the right lobe of the liver was thin, though otherwise of natural appearance, but it extended downwards nearly to the crest of the ilium. The stomach and transverse colon were covered and concealed by the depressed ribs of the left side. A long process, or appendix was observed stretching from the free margin of the great omentum to the right groin, where it adhered to the abdominal parietes at the inner ring of the inguinal canal. It was not very tightly stretched, and could hardly be said to constrict the coils of intestine over which it passed, but was quite capable of doing so if the intestines were distended. Immediately underneath this band a coil of small intestine was perceived bent upon itself at a somewhat acute angle, very partially engaged in the internal ring,—that is to say, a portion of its circumference slightly projected within the opening; but there was no obstruction to the passage of fecal matter along it. It was, however, firmly adherent to the sides of the ring. A probe could be easily passed from the wound in the groin into this portion of bowel, which was ileum.

17, Wimpole Street, July 23d, 1851.

CASES IN MIDWIFERY,

WITH REMARKS.

BY THOMAS RADFORD, M.D., F.R.C.P.ED.,
&c. &c. &c.

Consulting Physician to the Manchester and
Salford Lying-in Hospital, &c.

[Continued from page 101].

CASE VI.—The following case has been most kindly and liberally given to me by James Braid, Esq., M.R.C.S.Ed., C.M.W.S., &c. &c., for the purpose of publication.

“My dears sir,—I beg to hand you the following brief particulars of the case of Cæsarean section in which I operated in 1847. So far as it goes, it fully justifies the doctrine you so ably and properly advocate:—

“About 1 o'clock, p.m., on the 15th of June, 1847, I was requested to go to Wilmslow, in Cheshire, to perform the

Cæsarean section in the case of a poor woman named Mrs. Toft, who had been in labour since early on the morning of the 12th,—that was, three days and a half,—and for whom the surgeons in attendance considered there was no hope of relief otherwise than by such operation. I consequently started by the first railway train, accompanied by my son, and arrived at the house of the patient by half past 2 o'clock.

The patient was said to be about 30 years of age, and had been married 21 months. She became pregnant shortly after marriage, but aborted at the third month. On the present occasion she had arrived at the full term of utero-gestation *before calling for professional aid*, which, indeed, she did only *after* labour had commenced, which was early on the morning of the 12th. Mr. Mayson, surgeon, of Wilmslow, had attended her alone from Saturday morning till Monday morning, when he had Mr. Dean, surgeon, of the same place, associated with him, who continued his attendance along with Mr. Mayson up to the period when Mr. Dean came to request my aid.

The patient had always been of a feeble constitution, with fair complexion, but now she was excessively pale and exhausted, and was much disfigured by a large bronchocele. Her pulse was very rapid and feeble. On examination, the first object which attracted attention was the arm of a well-developed child protruding from the vagina, proving it to be a case of shoulder presentation. The bones of the outlet of the pelvis were so crushed together, that there was scarcely room for one finger to pass by the side of the protruding arm, so as to make an examination. The arm being pushed up, I ascertained that the rami of the pubes were so closely approximated that a finger placed edgeways could not reach the symphysis pubis; and the tubera ischii were only about an inch apart, for there was no point where two fingers placed side by side could pass when placed transversely: indeed, owing to the close approximation of the rami pubis, tubera ischii, and os coccygis, there was barely room sufficient to permit two fingers to pass the outlet of the pelvis in the antero-posterior direction. Owing to the shallowness of the pelvis, however, which must have been originally of small dimensions, I was the

more readily enabled to reach and determine the dimensions of the brim. I ascertained that there was not as much available space in the antero-posterior direction as to permit the points of two fingers laid side by side to pass the brim of the pelvis, excepting about half an inch exactly opposite the symphysis pubis, and there the fingers had barely room to pass. Beyond this, on either side, there appeared to be very little more than an inch of available space in the antero-posterior direction. The transverse diameter might exceed three inches, but then it was a crescentic form, which of course made it completely unavailable for delivery.

"My son having also made an examination of the patient, and made a similar estimate of the relative position of the bones of the pelvis at the brim and at the outlet, which were, moreover, firm and unyielding, we had no difficulty, in consultation with the other two surgeons, Mr. Mayson and Mr. Dean, in arriving at the conclusion that the woman must die undelivered if we did not instantly resort to the Cæsarean section. With such deformity as existed here, in the pelvic bones, it must have been all but impossible to have broken down and extracted the fully-developed child (which, from the protruding arm, this evidently was), even in a vigorous patient; but in a feeble woman like the one in question, exhausted to the last degree by the length of time she had been in labour, and the violence and acute suffering which she experienced from the pains, even up to the period when we were with her, it would have been perfectly futile and absurd to have made any attempt of the sort.

"The extreme violence and excruciating agony which the patient was suffering from the pains, rendered it the more desirable that the operation should not be unnecessarily delayed; and we therefore stated our views of the whole bearing of the case fully and fairly to the friends, and obtained their consent, and subsequently the patient's also, when I proceeded to perform the operation in the usual manner at 3 o'clock. I deem it quite unnecessary to occupy your time by giving any details of the operation; for, although a formidable and a most important one, and one which ought only to be performed from the necessity of the case, still, *quasi* a surgical operation, it involves compara-

tively little difficulty to those well acquainted with the anatomy of the parts, and are in the frequent habit of operating. A very few minutes sufficed to make the necessary incisions and to extract the child, the placenta, and the coagula found in the uterus. All this, and the stitching, dressing, and replacing the patient in bed, did not exceed ten minutes; and the whole pain sustained by the patient in consequence of the operation did not appear much to exceed a single pain such as she had in our presence from the throes of nature before we proposed the operation to her.

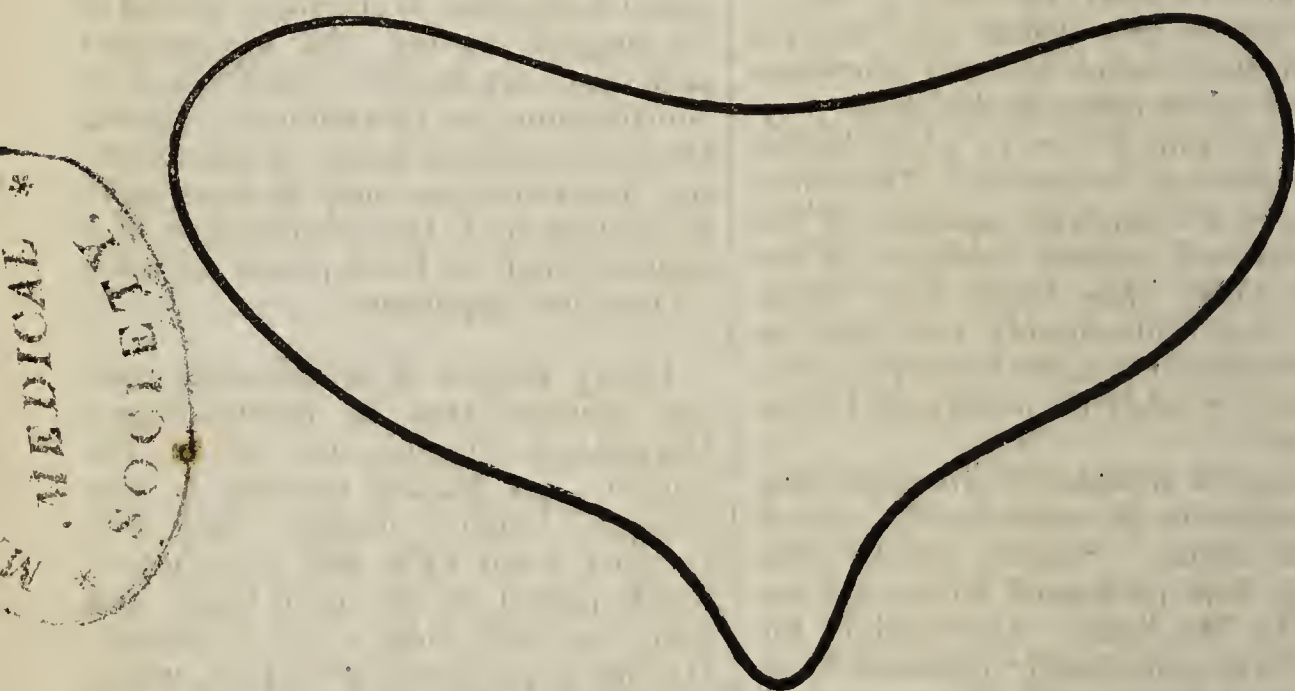
"The infant was large and well-developed, but was dead,—obviously from *previous detachment of the placenta*, for it was found quite detached, and surrounded by coagula, which at once accounted for the exsanguine appearance of the mother, as well as for the death of the child. There had been very little coloured discharge per vaginam, the egress having been completely closed by the shoulder of the child being impacted into the brim of the pelvis. Very little blood was lost by the incisions made during the operation, and very little passed per vaginam subsequently. After the operation the patient seemed to suffer no more pain, but she passed quietly away from exhaustion five hours and a half after the operation.

"On the 17th I went over, accompanied by my son and another medical friend, for the purpose of having a post-mortem examination. Mr. Dean was also with us. We had almost been too late, as the company had assembled before our arrival, for the purpose of interring the body. They consented to postpone it a very short time to allow us to make an inspection, but we were necessarily compelled to be very circumspect, as we were closely watched, and were thus prevented the opportunity of possessing ourselves of the pelvis. However, I had used the precaution of taking some plaster of Paris with us, and thus we were enabled to take an accurate model of the inlet of the pelvis. From this it was satisfactory to find that the estimate made of the brim of the pelvis, previous to undertaking the operation, had been very correct, as the following measurements of the cast prove:—About an inch immediately opposite the symphysis pubis; the diameter of the brim of the pelvis, from the symphysis pubis

to the lumbar vertebræ, was one inch and three-eighths of an inch, and beyond that, on the left side, it abruptly diminished to nine-eighths of an inch; and from that to half an inch and nothing; and, on the right side, from an inch and a quarter to an inch, and from that to the segment of a small circle.

"The transverse diameter, from right to left, was three inches and a half; but of this there was not more than two inches which would admit a ball to pass where it exceeded an inch in diameter. But, as already stated, the brim had assumed a crescentic form, so that when two straight parallel lines were drawn across the pelvis, they only showed two inches by one inch as the largest available space. Under these circumstances, therefore, it is quite obvious that delivery, by mutilation of the infant, could not have been undertaken with any hope of suc-

cess at any stage of the labour, however vigorous the patient might have been; how much less so then, with such a constitution as we had here to encounter, and with a shoulder presentation too! The cavity of the pelvis was so small as not to admit a body greater than a lemon. At the left side and anterior part of the fundus uteri, the walls of the uterus were fully an inch and a half in thickness, whilst a considerable portion on the posterior and right side was attenuated in an extreme degree; so that from this circumstance, and the violent and cutting character of the pains witnessed by us, had she been left a short time longer undelivered, in all probability rupture of the uterus, and death, would have been the result. Very little blood had escaped per vaginam subsequent to the operation, and there was only a small clot found within the cavity of the uterus.



"Full-sized outline of the brim of the late Mrs. Toft's pelvis, referred to in the foregoing paper, taken from a section of the cast.—JAMES BRAID."

"Here, then, is a case which I think fully justifies the Cæsarean section; for no medical man had been consulted until the woman *was in labour at the full term of utero-gestation*, and with physical attributes which rendered it impossible for her to be delivered in any other manner than by the Cæsarean section. The only cause of regret is that this had not been undertaken immediately after labour commenced, for in that case there is every reason to believe that the life of the infant would have been spared, with a tolerable chance of safety for the mother also.

This alternative had been proposed to the patient before I was sent for, but she obstinately held out against submitting to any such operation. I consider it but an act of justice to Mr. Dean and Mr. Mayson to record this fact, and that it took some management on my own part to obtain her consent at last. Although the operation failed to save the life of mother or child, still it relieved her of suffering for the last five hours and a half of her life, and her friends the pain of hearing her piercing screams, and witnessing the agonizing throes which accompanied

the unavailing efforts of nature to relieve her from her perilous condition.

"You can please append any remarks to this case which your experience in such cases may suggest to you.

"Believe me,

"My dear Sir,

"Yours very faithfully,

"JAMES BRAID.

"Arlington House, Manchester,

"May 8, 1851.

"Dr. Radford, &c., &c.,
Manchester."

DR. RADFORD'S REMARKS.—Malacosteon doubtless was the disease which caused the distortion of the pelvis of this poor creature; there are no data whereby to judge when its ravages on the bones commenced.

Some of the contingent circumstances which happened, clearly prove the truth of those statements I made a short time ago. (Vide LONDON MEDICAL GAZETTE for April 4th, 1851, vol. xlvii. p. 583.)

It was her *first labour*, and we have no evidence to show that any symptoms existed, either *before or during her pregnancy*, to induce her to place herself under medical treatment. The obstetrician was *completely ignorant* of the *physical and organic* condition of the *pelvis* until *after labour* had began. It is then indisputably true that no other operation but the Cæsarean could possibly or safely be performed for her delivery.

The great mischief of procrastinating the operation is emphatically proved by the result. Several serious evils arising from protracted labour are noticed by Mr. Braid. The death of the infant was undoubtedly produced by it, and most likely that of the mother. The internal flooding, the complete separation of the placenta, and the attenuated state of one portion of the structure of the uterus, which no doubt would have ended in its rupture, are solely to be attributed to delay.

In cases first and fifth, I have mentioned that violent irregular uterine contraction happened during the extraction of the infant, which, I stated, depended on the partial or complete detachment of the placenta; in the foregoing case, however, nothing of the kind took place, although this organ was lying loose in the uterus. Did the internal bleeding (which was so great as to bleach the general surface) act on the uterine tissue, and so influence its

contractility? Was the absence of this spasm (when its supposed cause was present) owing to the extreme degree of attenuation of the uterine tissue?

LESION OF THE KIDNEY.

(Read before the Abernethian Society,
March 13th, 1851).

BY JOHN H. HEWER, ESQ.

THE kidneys are so well protected that they rarely suffer from injury. Their immunity in this particular is, however, quite made up by the diseases to which they are liable, the nature of which is generally of so serious a description that, on the whole, they receive their share of the maladies to which the body is obnoxious.

Lesion of the kidney, being of infrequent occurrence, is sparingly treated of by surgical writers, and our medical periodicals are far from prolific in their contributions on this subject. I trust, therefore, that the details of the following interesting case may be acceptable, by leading us to the consideration of a subject which at least pleads for itself its practical importance.

Henry Barnes, a middle-aged man, was admitted into St. Bartholomew's Hospital on Monday, the 23d of December. On Sunday evening he was crossing London Bridge, and was knocked down by a cart, the wheel of which passed up his right thigh, and over the right side of the abdomen. He has experienced great pain, which he refers to the region of the right kidney, and he has noticed that a good deal of blood has passed with his urine since the time of the accident. His pulse is 100, and sharp; countenance anxious.—Ordered 16 leeches to the region of the right kidney. P. Opii, gr. ss. 6tis horis.

He soon got better, and all trace of blood in the urine ceased. It was thought that he had sustained but a trifling injury; but, on the 30th (nine days after the accident) a great quantity of blood appeared in the urine, and the pain over the right kidney returned. He was again treated with P. Opii, gr. ss. 4tis horis. The hæmaturia continuing, on the following day he was cupped to ʒvi. and ordered saline medicine.

Jan. 2d.—Much worse. This morning he passed sixteen ounces of pure blood per urethram; it coagulated, as if drawn from the arm. His pulse is feeble; tongue dry and brown.—*Hirudinēs*, xxiv.; *Acid. Gallic*, gr. v. ex aquâ dest. 3tis horis.

From this time the hæmorrhage continued more or less, in spite of the exhibition of every styptic, such as lead and opium, gallic acid, turpentine, tincture of sesquichloride of iron, &c. On the 13th it was suggested that quinine should be given him, as Mr. Lawrence was acquainted with a similar case where its exhibition was succeeded by the most satisfactory results. He was ordered *Quinæ Sulph.* gr. iij. 4tis horis.

In the evening, the hæmaturia continuing, he was ordered to take the quinine every two hours.

On the following day the quantity of blood was much diminished, and his general health seemed improved. In four days after taking the quinine the urine became quite clear. He now had a sharp attack of pleuro-pneumonia. His urine remained free from any admixture of blood for a week, and by this time he had recovered to a great extent from the mischief which had attacked his chest. On the 23d of January the hæmaturia returned; he was put on the quinine, and the urine in three days was quite clear.

This last fortnight it has been thought that the right side of his abdomen is swollen, and now (Feb. 13th) it is quite evident. The abdomen is tense and tympanitic, except the right lumbar and hypochondriac regions, which are dull. A consultation was held, and it was decided that fluctuation could be detected in the right lumbar region. An incision being made through the integuments and abdominal muscles, the fascia transversalis was exposed, and was found to be very tense. A grooved needle being introduced, pus presented itself; and, on the opening being enlarged, a quantity of fetid pus escaped, having a strong urinous smell.

From this time it was doubtful whether he would recover; his vital powers were at a very low ebb. He had stimulants freely administered; but, notwithstanding every care, he gradually sank, and died on the 22d of March, quite exhausted. From the time of the incision being made, to his

death, he passed urine freely from the aperture in the side.

On examination after death, there was found to be no fluid in the peritoneum. The subperitoneal tissue in places presented a peculiar inky appearance; this was confined to the right side of the abdomen. The right kidney was found to be small, its pelvis torn, and a laceration at its apex extending through the cortical and tubular portions. This rent communicated with a kind of cyst behind the peritoneum, which cyst contained a quantity of dirty purulent fluid, and some coagula of blood. A bougie passed from the artificial opening made in the side went into this collection of matter. The iliacus muscle had a sodden, leaden appearance. The other kidney was healthy in size and structure.

In making a few remarks on this case, I would notice:—

1st. The way in which lesion of the kidney may prove fatal.

2dly. The treatment to be adopted.

In injury to the kidneys, it does not appear that there is danger of a fatal termination in that way in which death often takes place where damage is sustained by other more vital organs: I mean, death by shock. This mode of death seems only to result from the reception of an irreparable injury, and where the system is conscious of its inability to remedy the existing evil. This may take place where both kidneys are greatly injured (which is very rare); but, in the generality of cases, where one kidney only has received damage, the other doubtless would assist its fellow, and be sufficient, at least for some time, for the carrying on the important duty of excretion; and thus there can be no fear of death from the want of elimination from the blood of those materials which are injurious to life. We must therefore search for the cause of death in these cases rather amongst the evils which result from the injury, than from the cessation of function which that injury might be imagined to have occasioned. Death may be caused principally in two ways:—

1. By hæmorrhage.

2. By suppuration or effusion of urine, and their consequent constitutional disturbances.

By hæmorrhage, which may take place either into the peritoneum or into the adipose and cellular tissue around the kidney. Death thus produced would be accompanied by the usual symptoms of internal hæmorrhage. But more frequently the blood passes into the bladder, and is voided per urethram, which occurs when there is no laceration of the capsule, but when the rent extends to the pelvis of the organ. And when we get the evidence of any injury to the lumbar region soon followed by pain in that region and hæmaturia, we may safely conclude that that blood proceeds from the kidney. Whether, however, blood remains confined in the body, or obtains exit, death from hæmorrhage may ensue, either quickly, from great loss of blood, or more gradually, from the frequent hæmorrhages, against which the system is unable to bear up; and, of the two, death more frequently results from secondary hæmorrhage. An instance of this is published in the 24th vol. of the *MEDICAL GAZETTE*, by Mr. Cæsar Hawkins, where death ensued from secondary hæmorrhage ten days after the accident.

2ndly. Death may ensue from effusion of urine and suppuration.

Should it so happen that the urine were extravasated into the peritoneum, the patient would most probably be destroyed by the peritonitis which would ensue, arising from the irritating effects of the effused urine. More frequently the peritoneum escapes, and the extravasated fluids reach no farther than the surrounding neighbourhood of the kidney. There inflammation sets up, which usually terminates in suppuration.

The patient whose case I have related lost his life by both methods I have mentioned. The frequent, and for long time uncontrollable hæmorrhages, brought him to a very low ebb, and no sooner was he to a certain extent recovered from their influence, than his already debilitated system was called upon to bear up against the lowering process of suppuration and extravasation of urine. Under their combined influences he succumbed.

I have not mentioned that suppuration of the organ itself may occur after some injury, and become the cause of death. This must, however, be a rare event.

I will now briefly notice the treatment to be adopted.

We may learn from this case that though hæmorrhage may occur at the time of the accident, yet that the symptoms may nearly subside, and yet after a few days come on with greater vehemence. When, therefore, we are called to treat persons who have received injury to the loins accompanied by slight hæmaturia, though the symptoms may soon subside, we should remember that this is no sure criterion of the absence of important injury. We should therefore act upon the worst supposition, and cause the patient to remain quiet, and for some days rigidly to observe the horizontal position.

Cupping on the loins is often very serviceable, being succeeded by diminution of pain, and checking or obviating the tendency to hæmorrhage. This will sometimes suffice, but often the hæmorrhage is so serious in amount that its cessation becomes a matter of importance. For this purpose many drugs may be administered; such as Acetate of Lead and Opium, Tincture of Sesquichloride of Iron, Matico, Gallic Acid, &c. The value and efficacy of these medicines are so well known, that it would be superfluous for me to do more than mention them.

There is one drug which I have omitted, which some practitioners are fond of administering in hæmorrhage from the kidney. But when that hæmorrhage is produced by laceration, its exhibition is, I think, very questionable.

Dr. Pereira remarks: "after the absorption of the turpentine it operates on the general system as a stimulant, and excites the vascular system, especially of the abdominal and pelvic viscera;" and in speaking of its exhibition to arrest hæmorrhages, he remarks, "it must only be employed in cases of a passive or atonic character."

It is true that in these cases the hæmorrhage may be passive, but still the inflammation, or, to say the least, the congestion which the injury occasions, is likely to be increased by the stimulating properties of the turpentine. For there appears to be no reason why, in the case of the kidney, our treatment should differ from that employed in injuries to other organs; for if in one of them extensive laceration had taken place, and inflammation might be justly apprehended, we should endeavour to

secure for that organ, as far as we could, perfect rest and immunity from the discharge of its ordinary functions: and so ought it to be with the kidney: instead of risking the use of the turpentine, which would only stimulate, and increase the excreting duties of the kidneys, we ought to endeavour to arrest the hæmorrhage by some less objectionable drug. We should as far as possible relieve the kidneys of their ordinary occupations by acting vicariously on the skin. And I think in many diseases of the kidneys, especially in that form of inflammation and congestion which occurs after scarlet fever, that, if this principle were carried out, it would be far better than exposing the kidneys to the stimulating properties of the long catalogue of diuretics which garnish our Pharmacopœia.

But the value of this case consists in its demonstrating the effects of quinine in arresting the hæmorrhage. That it did arrest it is a fact, but in what way I am totally unable to explain. The cause of its administration in this case was the knowledge of its having proved successful in a similar one.

THE HUMAN FORM,

AND ITS ABILITY TO RESIST INJURIES
FROM EXTERNAL SOURCES.

BY JOSEPH HINTON, M.R.C.S.L.

Surgeon to the Blaina Iron Works, South Wales.

THE more intimately we cultivate an acquaintance with the human form,—the more deeply we search into the mysteries of its action, and examine its various powers,—whether restricting our attention to an isolated portion, or endeavouring to scan the whole in one comprehensive survey,—fresh sources of admiration continually present themselves to the rational mind, in the wonderful adaptation of means to the end proposed; proving, at each successive step, that the whole is the work of One who errs neither in the design nor its accomplishment.

All the works of creation, in their respective states, are adapted to resist the injuries to which they are exposed; but the human form, *par excellence*, appears—if I may be allowed the expression—to possess a tenacity of existence

which in many cases is most remarkable. In the metropolis I have not noticed this so extensively; but even there, with all the depressing effects of miasm, and a host of other evils continually present to the senses of our existing sanitary reformers, we occasionally notice cases struggling through diseases—often even a succession of diseases, each of which might be deemed sufficient to destroy the remaining chances of life.

I might premise and thus dismiss a portion of the subject by saying that in these districts it is a rare occurrence for burns to terminate unfavourably, even when the whole of the trunk and face suffers; neither do the patients experience that degree of collapse which is so frequent an attendant in burns of a serious character, whether from the depth of tissues affected or the extent of injury received. Frequently these cases progress, without any extra nourishment, until the suppurating process has been established some time, the treatment being most simple, consisting of lime-water and oil externally for the first day or so, followed by slightly stimulating ointment, attention being also paid to the regulation of the bowels.

It is surprising to see men receiving injuries from masses of mine and coal, of one and two tons weight, sufficient to crush them, and yet living for days, and in some cases actually recovering from such accidents.

CASE I.—During a temporary absence from home, my friend and assistant, Mr. Dickinson, was sent for to one of these cases. One of the miners had been suddenly covered by a mass of mine and rubbish, estimated at two tons weight: with difficulty rescued from his perilous position, he was found to have sustained various injuries, several severe lacerated wounds of the head and face, denuding the bone; and he also complained of severe pain over the abdomen. There was no fracture of the pelvis that could be detected; no paralysis or loss of sensation in the lower extremities. Collapse followed, but gradually passed off. On the following day, no urine having passed, it was drawn off, and was found bloody. He subsequently passed the instrument for himself, and the bladder soon recovered its power. The bowels were obstinately costive, and yielded only to repeated

injections. On the third day he complained of pain in the right inguinal and femoral regions; this was very slightly increased by pressure, and was soon followed by unmistakeable swelling of a puffy character, with slight symptoms of ecchymosis. Fomentations relieved the pain, but the swelling sensibly increased; the ecchymosis extended over the abdomen and thigh of that side, the genital organs, and the loins. He became much lower, and sank on the sixth day after the injury.

This being one of my early cases here, I looked with no little curiosity to the solving of doubts which a post-mortem examination might disclose. Welsh prejudices are deeply rooted, and I confess that thus early I did not intend to run counter to them, foolishly suspecting that a coroner's inquest, with an examination of the body, must inevitably follow. But all this was most summarily performed: the body was viewed the day after death, and committed to the silent tomb on the same day,—the inquest actually held two days after; and of medical testimony there was none!

What, then, may have been the exact amount of injury must remain a mystery. Inclination led me to suspect subacute inflammatory action of the iliac vein,—a consequence of the injury which he had received; but this is merely a conjecture.

CASE II.—David Jones, æt. about 49, a strong, healthy man, while working in one of the pits, was suddenly struck down by some mine falling on the back of the skull, partially scalping it, and sending the poor fellow forwards against a sharp block of mine, thus fixing him between two points. I arrived at the house, and met him on the road being carried home sitting in a chair. Upon examination, I found the greater part of the scalp posteriorly removed, the skull quite exposed. Anteriorly, another large lacerated wound, elevating the flap of which disclosed several loose portions of the frontal bone, which I removed. Further, I found that a large piece of the frontal bone, about two inches long (across the bone) by one wide, had been wedged down, and was in some places an inch deep, the left edge going underneath the remaining portion of the skull. I removed

about half an ounce of cerebral matter, which was hanging loosely. During this time the patient was sitting quietly in a chair, perfectly rational and collected, giving orders to those around him, occasionally expressing pain, without the slightest sign of cerebral disturbance. Finding I could not elevate this portion of bone single handed, I availed myself of the assistance of my friend, Mr. W. Brewer; but by the time he arrived the patient was considerably weaker, and rather collapsed. Under these circumstances, we agreed that to remove or elevate this portion would most probably be followed by instant death, and a charge of murder from the bystanders; whilst, on the other hand, we felt convinced that in their present state no ultimate chance of life remained. The edges of the wound were merely drawn together by adhesive plaster, and the patient was ordered a little brandy to be taken occasionally. Towards the middle of the day he had rallied slightly; but in the evening he was again more collapsed: no signs of cerebral disturbance. The following morning I went with the full intention of elevating the bone, if the prospect of his bearing it appeared at all probable. One of his brothers, who considered himself no small judge in such matters—having, to use his own expression, “had much experience in such cases”—had sent for two other surgeons, as he thought that the dressing ought to have taken place the night previous. I did not again see this patient, but he was seen the same evening by these two surgeons. The wound, I heard, had united in great measure by first intention! They ordered a nice soft warm cataplasm; but I can scarcely fathom the *rationale*. The termination of the case may be very briefly summed up: he became gradually weaker, but without exhibiting any symptoms of compression, and he died on the fifth day after the accident.

Here, with injury of no trivial character to the brain itself, with a source of irritation unremoved, we yet find a man in the possession of all his reasoning faculties, and able to speak sensibly until death. Further, we see a large lacerated wound of the scalp, having throughout the greater portion no support from bone beneath, the edges of which had been brought together without any intent at union, nevertheless

united to no small extent within thirty hours! Whether, under the favourable elevation of the bone, the case might have proceeded satisfactorily, I do not take upon myself to determine; but with so much against the patient, and yet no extreme symptoms, I am inclined to think that the issue might have been otherwise.

CASE III. is in some respects still more peculiar. I was summoned to visit a young man who had met with an accident in one of the pits. I was surprised to find the patient sitting up by the fire, eating his breakfast. He told me that a large quantity of mine, &c., had fallen upon his back whilst he was working on his hands and knees. The accident happened about 12 o'clock at night, and he had remained in a tram in the pit, his fellow-workmen supporting his back. There he remained until the pit was worked in the morning, when he was removed to his lodgings. As he sat, a superficial glance detected only abrasions of some extent; but passing the finger along the spine, this could no longer be felt at the second lumbar; but from this to the sacrum the impression conveyed to the touch was that of a bladder half filled with fluid,—in fact, a boggy sensation. Firm pressure did not detect any part of the vertebræ: in this space there was no palsy, no loss of sensation. Rest and fomentations were the only remedies employed; and during his recovery, which was rapid, no symptom of any kind appeared to draw attention to the spine. In the course of a fortnight he appeared among the out-patients at the surgery; all the effusion had disappeared, and a small superficial abscess was the sole apparent remnant of the injury. The spinous processes still appeared to terminate abruptly at the second lumbar vertebra, and were felt indistinctly at the right of their normal position. A day or two ago I met this man walking as firmly as possible, without any complaint of pain, and for some time he has returned to his occupation.

The exact amount of injury in this case is difficult to define. I am disposed to think that the spinous processes of these vertebræ were broken off; and yet I can scarcely imagine them fractured to any extent without the spinal system sympathising in some degree, especially when we consider how

strong these processes are in the lumbar region; while, on the other hand, it is difficult to see how they could have been fractured partially without some portion of the remainder being traceable to the touch. Again, scarcely any strain remains after the accident, and the man is speedily at work.

I have still under my care a case where I was forced to amputate the thigh and arm of a man who had fallen on the circular saws in the forge: although he had secondary hæmorrhage, and the stump of the thigh was obliged to be opened, he is now progressing most favourably, and both stumps healing rapidly.

These cases, taken from others of the same character, though, perhaps, not quite so serious, seem to show a tenacity of existence, and a resistance to injury, which we do not generally meet with, and which, if report be true, is rarely seen, except in similar districts: it is remarkable, too, as occurring in a set of men, who, some years back, were considered the greatest drunkards. On this point, of late years, there is a manifest improvement; as a body, they are far less addicted to low life than the generality of the poor. Pay-day occurring only once a month, allows fewer opportunities for indulging in such propensities, even when the inclination is at hand. Again, the work is laborious, and those employed in it must be strong; added to which, their habits are regular and cleanly, many of the men performing systematic ablutions on their return from work; these tending in no little degree to the proper performance of the functions of the skin, and the healthy state of the whole frame. Besides these points in the steady workman, we may add the regularity of his hours, and though last, probably not the least consideration, the pure air of the hills.

ON THE SEAT OF THE PLACENTAL MURMUR.

HR. KIWISCH states that he has, from repeated observations, and investigations with the stethoscope, and examinations of injected bodies of pregnant women, arrived at the conclusion that this sound proceeds from the uterine and epigastric arteries, and that the epigastric artery is the vessel which contributes the greater share to its production.—*Verhandlungen der Physikalisch-Medicinischen Gesellschaft in Würzburg*, 1850.

ON THE DIFFERENT WAYS IN WHICH DEATH OCCURS.

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[Continued from last volume, page 641.]

Syncope from derangement at the heart—Modes in which the circulation may be arrested during the existence of a barrier at the heart—Causes which act on the obstructed heart to produce syncope—Shocks and extreme exertion—Effects of these on the healthy and diseased heart compared—Moderate exertion during exhaustion—Sudden changes of position—Fibrinous depositions.

On a previous occasion I discussed the subject of syncope, as arising from an overwhelming of the heart by means of an error in the arterial or venous system. I now take up another important subject; viz., syncope from derangements in the heart itself, the result of structural change in one or more of its parts.

The derangements in the heart, to which I first call attention as leading to the production of syncope, are those which act as barriers or obstructions to the course of the blood as it passes through the central circulating organ.

The cause of obstruction may be various;—an indurated valve—a polypous formation—a warty vegetation, &c.; and its position may be various also,—the semilunar valves of either side—the tricuspid or mitral valves—the auriculo-ventricular openings—or, even the centre of one of the cavities.

An old writer on this subject, who alludes particularly to syncope as produced by impediment at the heart, describes with much exactness the points at which these obstructions occur.

“(Inferes 1^o) facile syncopem invasuram, si repagula in textu sinus cavæ et pulmonariis, in ostiis utriusque magni arteriosi trunci in ponte arrectario valvularum tricuspidalium, mitralium et sigmoidearum, vel demum in principio, aut tractu emissariorum coronariorum delituerint.”*

* Vide Queye de Syncope et causis eam producentibus. Corollaria I., p. 306.

The reader will find this treatise in the seventh volume of Haller's collection of Select Anatomical Discourses, published in 1751, at Göttingen.

Of the delicate pathological characters of these sources of obstruction, and of all the occasions which give rise to them, it is not in my province to treat; it rests with me only to show how they affect life, when they have once arisen.

Of the relative effect that the different forms of impediment will have in producing syncope, I may remark, that, *cæteris paribus*, the danger of syncope increases in proportion to the extent of the obstruction and its power of resistance, and also that the position of the obstruction will somewhat modify the rapidity of the result. Thus, with reference to position, it is on mechanical grounds evident that pure syncope will be more rapid when the source of obstruction is on the left side than when it is on the right; for if the blood be suddenly checked on the right side, the heart, usually speaking, will contain some blood at the moment of stoppage, and the lungs also will retain some blood, which they will return to the left auricle; and so the left heart in contracting will drive round one or more circuits of blood after the arrest, and for a brief time animation will be kept up. But when a perfect obstruction occurs on the left side, the systemic circuit is cut short at once, and instant death must ensue.

But although, as a general rule, the danger of sudden syncope is in proportion with the extent, power of resistance, and position of the obstacle, it is at the same time necessary to qualify this remark by stating that exceptional cases to the rule laid down are not very uncommon, and that an obstruction may be found in the heart after death, with evidences of its having existed for years before proving fatal, and yet of such a nature as nearly to obliterate an important opening. One of the most singular cases of this kind with which I am acquainted occurred in the practice of a gentleman, (now deceased), Mr. Martin, of Haverhill, Essex, and is reported by Dr. Crisp, in his Prize Essay on Disease of Arteries.* The subject of this case was a gardener, 45 years of age, who for ten years past had suffered from symptoms of heart disease, but without dropsy, or any other affection serious enough to keep him from his labour. One day, on stooping to pick up some-

thing, he fell dead. At the autopsy, the lungs were found sound, but the left ventricle of the heart was hypertrophied, the aorta dilated, and the aortic valves converted into a bony circle, having a small oblong orifice which would scarcely admit the blade of a common-sized penknife. Nor is this very curious case the only one of the kind recorded, many like it have been met with, the lesion having even occasionally been found in patients who had died from some other cause.

It is proper moreover to add in this place, that these forms of heart disease, when they cause the extinction of life, do not invariably bring about that result by *pure syncope*, but sometimes by a compound form of death in which syncope forms only one element. Cases of this description will come before us on another occasion, and will meet with the consideration they deserve; at present I allude only to those cases in which simple syncope ensues.

The reader will have observed, that in the curious case related above not only was the aortic opening constricted, but the left ventricle was hypertrophied, the latter condition being so obviously a conservative process, set up for enabling the walls of the heart to meet the obstacle thrown in the blood's track, that I allude to it only by way of prelude to the observation, that scarce any serious affection of the heart ever exists without there being established some compensation to meet the danger and the difficulty; for "*nusquam alma rerum parens prolem deserit.*"

Thus we learn that the sufferer from an obstruction at his life's centre, is often by an admirable contrivance shielded from danger, as much as he can be, under the circumstances, and that life frequently is for a considerable time prolonged. But let not this knowledge make us think too little of the disease under which such a patient suffers; his life still hangs upon a thread, liable to be snapped by the most trivial accident. The heart, in fact, may be said to have lost its balance; its contractile power and its size are no longer, as in health, commensurate with the weight of blood which it receives, nor is the patency

of its flood-gates and cavities commensurate with its contractile power and capacity.

Briefly to record my own views on the subject, I believe there are two distinct modes by which the circulation may be brought to a stand during the existence of a firm and extensive barrier in the passages of the heart. *First*, in the event of an increased quantity of blood being sent to the heart, the barrier may afford so much impediment that the heart shall paralyse itself, in its endeavour to get free of its burthen. *Secondly*, in the event of a diminished quantity of blood arriving at the heart, the unyielding barrier, standing out as it usually does at a right angle with the walls of the heart, may prevent those walls during their contraction from approximating so near to each other as they otherwise would, and may thus keep the blood from being acted upon with a force sufficient to carry it past the obstacle, and may so lead to an arrest of the whole circulation.

In proceeding with our inquiry then, we discuss, first, those external accidents or causes which tend to produce syncope, in the cases of obstruction specified, and also examine into the mode by which these causes act.

Secondly, we consider the natural defences that are set up in opposition to the obstruction.

By this means we shall be enabled in the end to balance the power of these defences against the obstacle and accident, and thus arrive at some important practical conclusions.

Causes which act on the obstructed heart so as to induce syncope.

Exertion.—One of the most common causes of syncope in connection with an obstruction at the heart is *bodily exertion*. Why this should be so at once occurs to the physiologist, who takes into consideration the different modes by which exertion is capable of exciting the circulation. Thus, during those active forms of exercises, such as running or leaping, the effect of concussion upon the vascular systems is alone very great, as I have before shown. By it the various currents from the upper extremities are brought down more rapidly into the left auricle, while at the same time the course of the arterial blood through the ascending aorta is in a corresponding degree arrested,

* The preparation is the Museum of the Royal College of Surgeons. No. 15517.

whereby the heart is immediately affected in a marked degree, both at its outlets and inlets. Then by the same cause the respiratory acts are made to play with greater vigour, thus again affecting the central organ by throwing the blood more rapidly into its left side. Lastly, the effect of the muscular pressure on the veins may be noticed as somewhat accelerating the circulation; this latter, however, very slightly.

Looking, therefore, at these effects of bodily exertion on the circulation to the heart, it is easy to perceive what will be the result of them when one of the indispensable openings of the heart happens to be obstructed even in a small degree. The power of the heart may at first be good, and, receiving an over-charge of blood, the organ may act with sufficient power to propel most part of the charge; but the portal is too narrow to admit the whole current, the burthen from behind increases, and at last the heart becomes paralysed by its own efforts, and the circulation is choked at the centre.

Now such occurrences are really and truly often occurring in practice, and we are not without the means of distinguishing those forms of exercise which are most dangerous to patients labouring under heart disease, and also those circumstances under which exertion acts most determinately.

There are two kinds of exertion that are apt to produce syncope where there is an obstruction to the circulation at the heart. The first is, where the exertion is violent, as in running, leaping, climbing ascents, and the like; the second is, where the exertion is itself moderate, but performed under circumstances capable of rendering it dangerous.

Cases of syncope from the first-named class of bodily exertions, during disease of the heart, are very common; and the first attack indeed is often at once fatal: to give instances would be needless, every practitioner has seen some such.

In connection with this class of accidents it may not be inadvisable to speak of certain effects which sudden violent exercise has been found to produce upon the healthy heart; inasmuch as we shall then have a more perfect insight into the effects likely to be produced by them on an unsound one.

It is due to our illustrious country

man, Dr. Latham, to say, that he was the first observer who called attention to this important subject.

In one of his admirable lectures on Clinical Medicine,* he has very appropriately called the effects of which I speak "shocks to the heart."

The sum and substance of Dr. Latham's reasoning is this,—that during a state of health the system may sustain a shock, not in itself apparently violent, but of sufficient importance to lay the foundation of a most dangerous and incurable disease of the heart, attended with palpitation, dilatation, hypertrophy, and even valvular obstruction.

The accidents by which such disease may be produced have also been noted by this observer, and cases illustrative have been supplied. The shock may be produced by some slight accident or over-exertion,—running, rowing, plunging into cold water after fatigue, fits of passion, and the like.

All the cases related by Dr. Latham are very striking, and deserve the careful perusal of every medical practitioner. I shall just sketch out one:—

A young man, between twenty and thirty years old, and who has been intemperate, is seized in the midst of a vigorous pastime (rowing) with sudden pain at the heart, and sense of approaching dissolution. His physician ministering to an emergency, bleeds him largely, and the relief that follows is so instantaneous that he is sure it has saved his life. But pain and palpitation remain, and often bring on the same sensation of death, relieved by the same means. Twice or thrice in two years the palpitation has run on to excess, and the death-like feeling reappeared. He is engaged in a profession; but whatever he does, business and pleasure, and eating and drinking, are all under the constraint of continual watchfulness, for the sake of moderating the palpitation of the heart.

Cases of *valvular disease*, arising from the effect of shocks to the system, have also been recorded.

At a late meeting of the Pathological Society of London,† Dr. Peacock exhibited a specimen of aortic valvular disease, finely illustrative of this subject.

* Lectures on Clinical Medicine, lec. xxviii. vol. ii. London, 1846.

† Meeting held May 6th, 1851. For report vide LONDON MEDICAL GAZETTE, for June 6th, 1851.

The subject of the case was a sailor, who, while endeavouring to ascend the mast of a ship more rapidly than another man, was suddenly seized with pain in the region of the heart, and *syncope*, and ever after suffered from symptoms of cardiac disease. He died on the 7th of April, 1851, in St. Thomas's Hospital, having been able to attend to his duties for a considerable portion of the time between the accident and his death, a period of many months. The autopsy showed the heart large, weighing $17\frac{3}{4}$ ounces, with hypertrophy and dilatation of left ventricle. The aortic valves were extremely incompetent, the left and posterior valves being much thickened and shortened, and having their common angle of attachment inserted at a point nearly half an inch below the level of the two other angles. Above this point there was a large and thick plate of bone, and on the lining membrane of the ventricle, and the free fold of the mitral valve, there were small particles of organized false membrane; near the free edge of the mitral valve there was a small orifice, which communicated with a long body, resembling an ordinary vegetation, which projected into the cavity of the left auricle.

A case has also been related by Dr. Crisp, of heart disease, consisting of vegetations on the aortic valves, and enlargement of the left side, ultimately causing death, in which the disease seemed to have arisen from the effect of three powerful shocks from an electrical machine. This case was one, I believe, of the same kind as those just referred to.

As regards the manner in which the accidents specified produce their peculiar and dangerous effects upon the heart, an explanation has already, to a certain extent, been found.

The patient at the moment of the accident is subjected to exercise of some kind, or to some series of acts involving considerable bodily disturbance. In Dr. Latham's case, the patient was engaged in a vigorous pastime (rowing). In this exercise the strain on every part of the body may be said to be excessive: the respiration is rapid and deep, and the chest is expanded to the utmost. In the course of every few seconds the body is brought forward in the form of a semicircle, and then carried back with a violent effort to the same extent as it had been pro-

viously advanced. The direction in which the blood should be propelled to the upper half of the body is thus continually altered, and each backward movement acting like a concussion to the feet, tends, in a way that I have before shown, to throw the ascending arterial current down upon the heart. Lastly, the power that the muscles may have over the veins is now brought into its fullest play.

The heart, called by all these combined acts into unwonted action, for a time overcomes the excessive duty thrown upon it. But it may be fairly overburthened at last, may succumb, and then *syncope* follows. In the case related by Dr. Latham this extreme conclusion was averted, and the load on the heart relieved by venesection. But though immediately fatal effects were for a time warded off by this means, yet disease remained, and the train of symptoms described again and again returned. With what morbid condition of the heart were these connected?

In answering this question, the function of the heart, as an involuntary and everacting muscle, must be taken into account, together with the fact that this muscle has been overburthened, wearied, and thrown out of tune. In the event of any common muscle, such as the deltoid, being overtaxed in the same way, the bad effects may be remedied, and pristine vigour restored by means of one simple condition,—*rest*. But in the case of the heart this is unattainable; the heart can never rest, and hence it never thoroughly gets over the effects of the wearied state into which it was thrown. It may play on, but its nice equilibrium is lost, its action is irregular, and a portion of its energy gone, and any renewed obstacle thrown in its way, is met now, not with the slow tonicity of health, but with a quick palpitating beat; the organ, in fine, is endeavouring to perform *by rapidity of action* what it fails to effect *by simple power*; a sure sign of great and dangerous debility.

But still further. The want of tone in this muscular viscus cannot long exist without leading to another important change,—*viz.*, expansion of its walls, and consequent dilatation of its cavities. Here, too, are the germs of a second danger, for as the cavity dilates, its capacity for holding blood increases, and if this goes on progressing, nothing

is more obvious than that in time, on the event of any acceleration of the circulation, the propulsive power of the heart shall not be commensurate with the weight of blood it must propel.

To meet such a conclusion, however, one of the laws of the animal economy comes into action, that, viz., in virtue of which muscular structures, when thrown into a state of quickened action, have their nutrition increased, and their substance thickened, or hypertrophied. In the case of the heart this change also happens, for it has been shown that, under the circumstances narrated, the organ in losing energy gains in rapidity of action; the increased rapidity ensures augmented nutrition, hypertrophy results, and thus, by an admirable necessity, power is to a certain extent regained.

In reviewing the subject of shocks to the healthy heart, we see more clearly how much greater must be the effect of similar shocks on a heart in which any obstruction exists, and appreciate to the full the increased danger that must necessarily follow.

But it is not violent shocks or excessive exertions that are alone dangerous; for certain conditions being present, common and very moderate exertion may lead to fatal results, where there is even trifling disease at the heart.

The conditions that may be named as favouring such issues are, exhaustion of the body from fasting or any other debilitating cause. I could give numerous examples of syncopal death following exertion under such a condition; one, however, is all that I have space to record, and of this I can give but the briefest abstract. It is related by that truly excellent observer, Louis, in his treatise entitled "*Des morts subites, ou survenues très promptement et tout à fait imprévues.*"

The subject of this case is a joiner, aged twenty-one years, who whilst passing the hospital La Charité, on his way to breakfast with his brother, falls to the ground insensible and powerless. He is at once conveyed into one of the wards of the hospital, and the house surgeon, M. Beaumetz, tries to take blood, but the patient is no more.

This young man is represented to be of good conduct, and has not complained of any particular uneasiness to his brother, with whom he lived on most friendly terms.

In this case, as will be observed, death took place immediately before the morning meal, when we may presume that no food had been taken for a considerable period, probably not since the previous day.

The post-mortem appearances are narrated at great length; but I shall remark concerning them, that as the suddenness of death could be referred only to two organs, the brain or the heart, these parts were especially examined. The brain was found soft in some of its parts, and a little injected, but the heart was the seat of the greatest mischief; its left ventricle was dilated and hypertrophied; the aortic and mitral valves were much ossified, one of the ossifications on the aortic valves having the form of a stalactite; the orifices of communication between the aorta and the ventricle, and between the auricle and ventricle, were extremely contracted, and the ventricle contained but very little blood.

In the remarks with which the author concludes this case, he seems inclined to think that death took place by *syncope*, and is only prevented from asserting such as the fact by the circumstances that the face presented a slight violet tinge at the time of dissolution, and that there was no apparent cause for the attack.

With reference to the dark tinge of the face, however, I do not think it by any means necessarily absent in cases of pure syncope: on the contrary, I believe it is not unfrequently present, being dependent on the circumstance that, the heart failing in its ability to drive the blood round the circuit of the body, the venous circulation is suddenly arrested, and the veins of the surface injected.

With reference to the immediate cause of the syncope in this case, I think it is found in the fact of the system requiring at the time to be recruited with food: the heart, large and obstructed, and not receiving the supply of blood required under the circumstances, failed to contract sufficiently to force on a fresh current of blood from its left side, and thus gave rise to instantaneous death by syncope.

Sudden change of position, as it greatly affects the healthy heart, so, also, does it more seriously act upon an obstructed one, and therefore often proves a cause of sudden death.

The changes of position that are more apt to be followed by syncope during heart disease are, as far as I am aware, bending of the body forward from the perpendicular, and suddenly raising it into the perpendicular from the recumbent position.

An illustration of death by syncope from the first of these causes has already been given from the practice of Mr. Martin, where a gardener, after living several years with a most dangerous barrier in his heart, died suddenly in the act of stooping to pick up something from the ground. I am inclined, however, to believe that such a change in position as the one named only causes death in very extreme cases of obstruction, and where the obstacle exists at the grand outlet of the heart,—*i. e.*, at the aortic ventricular orifice, as it did in the case alluded to, and in which it seems obvious that the merest change might have been sufficient to terminate life; the act of stooping especially so, inasmuch as it would alter entirely the course of blood through the left ventricle and ascending aorta from an upward to a downward flow, and thereby increase the diameter of the current that had to pass through the contracted and unyielding orifice.

The second change of position to which I have alluded,—*viz.*, rising erect from recumbency, is a much more common cause of fatal syncope during the existence of a barrier at the heart. Cases of this kind are familiar to every practitioner; and the cause of death in them is obvious to every one acquainted with the fact, now well ascertained, that in health the action of the heart is invariably increased on raising the body from the recumbent posture. I need not here enter into the reasons why this should be so; but I may state that, let the theory of the matter be what it may, one thing is certain,—*viz.*, that under the conditions named the heart receives a considerable increase of blood into its chambers, and that, in the case of a barrier existing at any of the outlets of these chambers, sudden stoppage in the motion of the central organ of the circulation frequently happens, from its inability to relieve itself of the charge thus thrown suddenly upon it.

In a previous paper I have shown how, from this last-named change in the position of the body, sudden death will sometimes ensue by syncope during

recovery from fevers and other diseases of debility. It is not unnecessary here to state that death in these two sets of cases nevertheless follows differently, although brought about by the same cause. In the syncope from debility there need be no barrier to the course of the circulation; the heart fails from simple weakness, and is left more or less emptied of blood; while in the cases which have been lately dwelt upon, and in which a barrier exists, the heart may have power, but be unable to exert its power to advantage. I allude to this difference, because, as will hereafter be shown, it involves most important diversities in managing these several classes of cases.

The observations already made as to an advanced state of heart disease being usual before the act of stooping proves fatal, hold good, also, in regard to the change of position now under consideration, though not to so great an extent.

The effects, indeed, of very considerable obstruction often continue to progress for a long time, during which the heart dilates and hypertrophies, and not uncommonly becomes charged with clots of blood: yet in this state it sometimes continues to act, and the patient survives for a long time, suffering all the secondary miseries of heart disease. At length, while performing some slight act,—as that of rising from bed, the circulating organ suddenly becomes effectually clogged, and life departs by a rapid syncope.

Bouillaud, in his admirable clinical work on diseases of the heart, gives a good illustration of the effects I have just traced, in the case of a young man who, after several attacks of rheumatism, is brought under clinical notice, suffering from confirmed heart disease, attended with most distressing symptoms. He struggles on until the 17th day of admission, when, at four or five o'clock in the afternoon, he complains of difficult respiration and inability to speak. His limbs are cold; he has raised himself into the sitting posture, and some minutes afterwards he has fallen forwards. He is returned to bed; the body is cold, the pulse feeble, thread-like, and almost insensible, as also are the beats of the heart. Respiration is endeavoured to be established by mechanical action to the thorax, and the

jugular vein is opened, but to no purpose—life ceases.

The autopsy shows the heart to be greatly enlarged (equal in volume to that of a calf); its cavities are engorged with clots of blood, some recent, others in the right cavities of older date; one is firm and white, analogous to washed meat, and very adherent. The right ventricle is hypertrophied, but its valves are healthy. Upon the aortic valves are warty vegetations, and the valves themselves are hard and thick, but act tolerably freely. The bicuspid valves are thickened, the aortic orifice is contracted, and the cavity of the left ventricle very much dilated.

Such is a short sketch of the case, many important lesions being omitted. Of the mode in which death was brought on, the author remarks that some difficulty remains, but adds that the clots of blood in the heart had probably something to do with the matter: “*Toutefois, il est probable que quelques-unes des concrétions sanguines rencontrées dans le cœur n’ont pas été étrangères à ces accidents.*”*

The several causes I have thus far mentioned are sometimes aided in bringing on syncope by another condition during the existence of valvular or other obstruction. It would seem that, in certain states of the blood, the fibrine of that fluid is capable during life of becoming coagulated in the course of its agitation against the valves and other structures of the heart, in the same manner as it can be coagulated, after removal from the body, by agitation with a stick or bunch of twigs. This opinion, first promulgated by Bouillaud,† has met with the sanction of Dr. Hope, and is, I believe, essentially correct.‡

Now in the case of a valve being more resistant than is normal, and of a valvular opening being contracted, it is evident that, on the application of an exciting cause such as the one last alluded to, or any of the previous ones, this fibrinous deposit may be left in sufficient quantity on the valve to close up its contracted orifice, and so, by affording a great barrier to the course of the blood, may arrest the play of the

heart and bring on instant syncopal death.

A case of sudden death related by Dr. Crisp in his essay to which I have already referred, affords, I opine, the best illustration on record of the occurrence to which I allude.

The case briefly is this:—A woman in the Walworth Poor House, who has gone through a good labour, suddenly dies a few days afterwards, shortly after raising herself from the recumbent into the sitting posture. The autopsy discloses the heart as the seat of the mischief. The left ventricle is much hypertrophied, the edges of the semilunar valves are irregular, one valve is much thickened and cartilaginous, and to this is attached a fibrinous coagulum two inches in length, and extending into the aorta. The membrane lining the valve internally is ruptured, and the right auricle is filled with a white gelatinous coagulum.

The elements of the fatal event in this case consisted in the forcing of too large a stream of blood, brought suddenly into the heart in the act of rising from recumbency, through the contracted aortic orifice, and past the indurated valve, the effect of which was the production of a large fibrinous deposit, which effectually plugged up the opening. The cause of the ruptured membrane probably lay in the efforts made by the heart to force a passage past the barrier.

I assume, also, that the fact of the occurrence taking place so soon after pregnancy, and the existence of the white gelatinous coagulum found in the right auricle, both tend greatly to strengthen my view.*

Mortlake, June, 17, 1851.

[To be continued.]

ROYAL COLLEGE OF SURGEONS.

GENTLEMEN admitted members on the 30th ult.:—Messrs. F. Martin—J. Salisbury—J. Dale—J. Andrews—W. Smith—J. S. Dodd—C. J. Tovell—and J. F. Wright.

Admitted on the 31st ult.:—Messrs. J. Wiles—R. H. Blake—W. B. Chavasse—E. D’A. Evezaid—E. C. Buckall—J. R. A. Douglas—W. Rhys—D. Jones—and K. Hardey.

* Bouillaud, des Maladies du Cœur, Observation 97.

† Op. cit., t. ii., p. 313.

‡ Hope on Diseases of the Heart, p. 370.

* It is but fair to add Dr. Crisp’s own view of the case, which is, that death was occasioned by the rupture of the valve, vide p. 89. The preparation is in the College Museum, No. 1556.

MEDICAL GAZETTE.

FRIDAY, AUGUST 8, 1851.

THE Quarterly Return of the Registrar-General, which has just reached us, presents as usual many facts of great interest and value in medical statistics. It is certainly highly creditable to the Registrar-General, and those placed under him, that we have now a quarterly publication, setting forth, even to the minutest details, the relative mortality of cities, towns, and villages, throughout England and Wales, and thus pointing out the comparative salubrity or insalubrity of places. When we look at the array of figures on which the conclusions are based, and consider the numerous and complex returns from which they have been collected, we are constrained to regard this quarterly summary as a remarkable instance of the watchfulness and care bestowed on the sanitary state of the country. We wish we could say that the same watchfulness is with equal energy directed to the removal of those causes of disease and death which are here chronicled with such numerical accuracy. Our readers are too well aware of the deficiencies of Government in this respect, to need that we should point them out. While we take the lead of all other nations in our regular statistical publications of births and deaths, we are content to allow the tide of mortality to roll on without any attempt to break its course, and we hand over the control of the health of the country to a non-medical Board of Commissioners, who are as incompetent to suggest, as they are to carry out any really useful sanitary measures.

Our present purpose is, however, to deal with the Quarterly Return. Marriages are not of much interest in a

medical point of view: we pass at once, therefore, to Births and Deaths. The former indicate the increase of population in spite of depressing causes; while the latter throw a light upon the results of medical practice in checking disease.

| | | Births. | Deaths. |
|------|-------------------|---------|---------|
| 1850 | { March quarter . | 144,602 | 98,607 |
| | { June quarter . | 155,727 | 93,005 |
| 1851 | { March quarter . | 157,374 | 105,446 |
| | { June quarter . | 159,138 | 99,639 |

These births and deaths refer to all the districts of England. The figures show that, taking the quarterly numbers, or in comparing one year with another, the increase of births is progressive. The mortality table, however, presents great fluctuation. Thus the first quarter of the present year is remarkable for the great number of deaths; and the mortality for the June quarter of 1851 is greater than in any one of the quarterly periods for 1850.

“The *annual rate* of mortality in the *Spring quarter* (April, May, June) was very uniform in the years 1841-46, or 2·141 per cent. on an average, 2·174 when highest (1841), and 2·077 when lowest (1844); in the Spring of 1847, after the potato failure, the mortality rose to 2·506, and remained 2·314 and 2·341 in the Springs of 1848 and 1849; in 1850 it fell to 2·106. In the Spring quarter of 1851 the mortality was at the rate of 2·228 per cent. per annum, which is lower than the mortality of the three bad seasons (1847-8-9), but higher considerably than the mortality in the corresponding quarter of the 7 years 1841-6 and 1850: Measles, scarlatina, small-pox, and hooping-cough, were epidemic in many districts, and the chief causes of the high mortality.

“Different epidemics prevail in different places at the same time, and the kinds of disease-matter are distributed over the face of the country like clouds over the sky: the outbreaks are partial, segregate, or universal; an epidemic arises and disappears in a village; at other times it radiates from a town; and at rare intervals infests the whole population. This law of the distribution of

disease disclosed by the registration returns has a practical application; for if it is advantageous to know the places of the country which are generally salubrious, it is also useful to know at any particular time whether they are free from epidemics. Every disease of the zymotic class appears in almost every place at irregular intervals; and when people living in cities leave them, and visit watering-places or open healthy districts, they may arrive in the midst of an epidemic, to which their families are thus unnecessarily exposed. The Quarterly Returns show generally what places are healthy, what are unhealthy, in each season, and, with the local registers, furnish the information that is required to avoid the dangers of temporary residence in districts either habitually or casually the seat of epidemic visitations."

Although there has been an annual increase of population, the rate of increase from 1841 to 1851 has been smaller than from 1831 to 1841. The following summary regarding this increase, and the present state of the population of the country, as shown by the returns of the last census, will be found of interest:—

"The annual rate of increase from 1841 to 1851 is found to have been 1.212 per cent.; whereas it was 1.332 per cent. in the 10 years 1831-41. To a slight extent the rate of mortality has hitherto been understated in the Tables of the Quarterly Return; but the results for 1850, when the error is greatest, are only affected in the second decimal place.

"The population of England and Wales was 15,914,148 on June 7th, 1841, and 17,922,768 on March 31st, 1851; and this implies such a rate of increase that the population, exclusive of persons in ships, must have been about—

| | |
|------------------------------|------------|
| in the middle of 1851 . . . | 17,977,000 |
| " 1841 . . . | 15,930,000 |
| and the increase in 10 years | 2,047,000 |

"The population of England and Wales, therefore, increased, on an average, 204,700 annually; 51,175 quarterly; 3923 weekly; and 560 daily. Prior to 1850 the excess of registered births over deaths does not account for

the whole of the increase; but in 1850 the births exceeded the deaths by 223,888; and in the June quarter of 1851 there is an equivalent excess: for the births of 159,138 children the deaths of 99,639 persons were registered, which leaves an excess of 59,499 persons in the population."

We find but little requiring notice regarding the excess of mortality in particular districts. There has been no general epidemic, as in 1849; but various diseases have been more prevalent, and have proved more fatal, in some districts than in others. We are informed that the mortality of the county of Cornwall was raised above the average by the prevalence of scarlatina and small-pox. The registrar of St. Ives gives an instance of the effects of mistaken fatalism among an ill-instructed people:—

"People have a superstitious fear of having their children vaccinated. They say 'it is taking the cause out of the hands of God.'"

As if to show the penalty paid as a result of this neglect, we are informed that, with respect to Shrewsbury, of the 34 persons who fell a sacrifice to small-pox in one sub-district, not *one* had been vaccinated.

The health of the Metropolis exhibits no improvement during the quarter.

"The deaths out of 2,361,640 living were 13,093, which exceed the deaths in the corresponding June quarter of the preceding year by 1855, and are 88 more than were registered in 1849: 209 persons, chiefly children, died of small-pox, 495 of measles, 169 of scarlatina, and 734 of hooping-cough. The mortality from diarrhoea is declining; it caused 202 deaths in the June quarter of 1847, and 191 deaths in the corresponding quarter of 1851. The deaths from cholera in the 5 June quarters, 1847-51, were 4, 17, 268, 9, 3."

So far as a judgment can be formed from these returns, there is nothing at present to indicate that the cholera is likely to reappear.

Reviews.

The Wisdom and Beneficence of the Almighty, as displayed in the Sense of Vision. The Actonian Prize Treatise for 1851. By T. WHARTON JONES, F.R.S., Ophthalmic Surgeon to University College Hospital. Small 8vo. pp. 135. London: Churchill. 1851.

PROBABLY it is not for us to determine whether the Hundred Guineas that are given away every seven years as the Actonian Prize, might not have been better spent than in Essays on Natural Theology. Be that, however, as it may, as the prize has been held out, we have no doubt that the award has also been justly merited. Mr. Wharton Jones's great reputation and known physiological acquirements were sufficient of themselves to have assured us before we read the work that the subject would be profoundly and skilfully handled. The perusal thereof brings a full and satisfactory realization of our expectations. The introduction and two first chapters are engaged upon general observations, suggested by the subject of the Treatise; eloquent and appropriate. The third chapter enters upon the consideration of the sense of vision in particular, and is divided into several sections, the objects included in which we now proceed to bring before our readers somewhat fully, for although by its nature adapted for the general reader, this treatise is also by its contents well fitted to convey much information in an agreeable manner to the professional reader who may not have enjoyed the opportunity of maintaining himself *au niveau* with advancing physiological science.

Mr. Jones first treats of the eye considered as a Camera Obscura, explaining its various parts, and pointing out in its dioptric apparatus the analogy with that mechanism. The performance of the instrument as shewn in the action of its dioptric apparatus on the rays of light, as influencing the projection of images on the retina, and as correcting spherical aberration, are illustrated by the construction of optical instruments by man, and exhibited in the perfection of the mechanism of the human eye. The contrivances also by which the several parts of the dioptric

apparatus are so adjusted as to obviate chromatic and distasteful aberration are succinctly and lucidly explained. In another "Section" the author enters upon the consideration of vital endowments of the optic nervous apparatus, by means of the adaptation of which to the physical constitution of the eye, vision, or the act of seeing, is effected. The first point connected with these is that which has been termed the "outness" of visual perceptions. The author argues for an original law of the mind by which objects are perceived to be out or from us, and refutes the opinion that they are first perceived to be in the eye in the same manner as a tactile sensation is referred to the organs of touch. If, observes the author, the fact were as stated, that persons when they first see, think that all things touch the eye, it would be no support to this opinion, since it is merely the surface of the eye that is alleged to be the seat of sensation, whereas it ought to have been the retina, and the person ought therefore to have supposed that the objects not only touched, but were actually in the eye. Much more trustworthy evidence, as Mr. Jones very forcibly points out, is supplied by infants and the young of animals.

"An infant grasps at external objects. Young turtles and crocodiles, Sir Humphry Davy tells us, hatched without care of parents, run to the water. The crocodile will bite at a stick, if presented to it, the moment it is hatched; and a chick, on emerging from the shell, will run and pick up a grain,—an act the animal would not be likely to perform if it referred the grain to the interior of its own eye, instead of to without, and to some distance from its body." (p. 68.)

In further illustration of this original connate property of the optic nerve, the author refers to the well-known sensations referrible to a lost limb.

To an analogous connate law Mr. Wharton Jones refers our seeing objects upright as they are, notwithstanding the impression on the retina is inverted, and which we must conclude is independent of all experience.

In discussing the apparent size of objects, the author observes:—

"The greatness of the apparent size of visible objects, in proportion to the extent of the retina impressed by their pictures, depends on the projection outwards of the mind's perception of the figure. The size

of the retinal picture being the same, the greater is the apparent size of the mind's picture, the farther distant out from the eye it appears projected. This is well illustrated by ocular spectra consequent to impressions on the retina. Thus, if after having in the morning twilight fixed our eyes on any object, we direct them to the sky, we shall see its spectrum projected of a gigantic size on the distant gray expanse.As, in viewing an object, the eyes are adjusted to the distance at which it is situated, and the mind refers its perceptions outwards to that distance, it follows, from what has been above said, that the distance at which the object is situated, and the size of the picture it projects on the retina, are the conditions which determine its apparent size. As to the size of the picture on the retina itself, that depends upon, and is in proportion to, the optic angle under which the object is seen."

A third section is concerned with "the duration of sensations after the impression on the retina has ceased, which has been estimated at about one third of a second." To this duration of impression the author refers our capability of looking at a succession of objects within certain intervals, as for instance in reading. The numerous stories of ghosts, visions, &c., are, as Mr. Wharton Jones observes, probably explicable by reference to this law of the nervous apparatus of the organs of vision.

Single vision with two eyes, and the visual perception of the three dimensions of objects, are in the next place explained. The remaining subjects of this chapter are, the movements of the eyeballs, and the provisions for the protection of the eyeballs.

The work concludes with the consideration of the sense of vision in the lower animals, including a comparison of the eyes of birds and fishes, a notice of the compound eyes of insects and crustaceans, and the provision for the protection of the eyes in the lower animals.

The readers of this little work will we feel assured concur in our opinion that the award has been made to merit. Not only the professional reader, but to the student of God's works, and to the devout admirer of the wonders of His Wisdom and Beneficence, this Treatise will prove most welcome.

Practical Remarks on the Treatment of Aneurism by Compression; with Plates of the Instruments hitherto employed in Dublin, and the Recent Improvements by Elastic Pressure. By JOLLIFFE TUFNELL, M.R.I.A.; Fellow of the Royal College of Surgeons in Ireland; Surgeon to the City of Dublin Hospital, &c., &c. 8vo. pp. 154. Dublin: Fannin. London: Churchill. 1851.

THIS work, the author informs us, has grown out of a clinical lecture on a case of aneurism, which he delivered to the class attending his Lectures on Military Surgery. Having been requested to print the observations then delivered, Mr. Tufnell has published the essay before us, with the hope of lessening the prejudice which still exists against the use of compression in the treatment of aneurism, and with the desire to spread practical information with respect to this operation. In the fulfilment of his purpose the author first refers to the case lately under his care; in the next place he points out the principal features of the treatment of aneurism by compression, and the particulars which must be practically attended to in conducting this mode of cure; and lastly, by a summary of the evidence in its favour, and comparison with that of treatment by the ligature, he endeavours to show how far the superiority may be considered as pertaining to the treatment by compression.

Mr. Tufnell, after a careful examination of the history of the operation by compression, accords to Dr. Bellingham the palm of merit for the complete and permanent establishment of this method of cure. To the Dublin surgeons the credit certainly belongs of having diligently examined all the advantages and disadvantages of compression, and of having shown how greatly the former preponderate. Engravings are given by Mr. Tufnell to illustrate the improvements that have been successively made in the instruments employed, including the last addition of the caoutchouc pad and straps contrived by Dr. Carte.

In directing attention to the features to be practically observed in the treatment by compression, the author offers many very judicious practical observations on the diagnosis of aneurism, on the varieties which are exhibited by this disease of the arteries, and on the

degree of pressure to be used under different circumstances, with many other practical remarks which the subject calls forth.

Whilst summing up the evidence in favour of compression, Mr. Tufnell gives a table of thirty-nine cases of aneurism treated by compression in Dublin during the past eight years, with the following results :—

“In thirty of these cases the cure has been perfect and complete.

“In one, compression was discontinued, the aneurism not increasing subsequently in size.

“In two, the ligature was resorted to, and the artery tied with success.

“In three, amputation was necessary, each instance being followed by recovery.

“In one case death ensued from erysipelas.

“And two died from co-existing disease of the heart” (p. 112).

The peculiar features of each of these cases are recited by the author with sufficient minuteness to present a complete history of the disease, and as these thirty-nine are stated by Mr. Tufnell to be the only cases that have occurred in Dublin up to the time the table was composed, they constitute a valuable body of evidence in favour of the treatment by compression, which is thus shown to have paramount claims upon the attention of the surgeon. The introduction of this mode of treatment must be viewed as a most important feature of modern surgery. By this means, so simple, speedy, and safe, all the pain and dangers of operations by the knife are entirely superseded, except in a very small number of cases, which the author points out as calling for the use of the ligature.

Every surgeon knows that too large a proportion of the cases in which ligature has been had recourse to, have terminated fatally, besides which many of the recoveries have only taken place after severe maladies of several kinds,—such as erysipelas, sloughing of the integuments, sloughing of the toes, secondary hæmorrhage, requiring a second ligature, subsequent amputation, &c. The adoption, therefore, of a mode of treatment from which most of these accidents are banished, and the others are reduced to their minimum, must undoubtedly be hailed as a great improvement.

It is much to be desired that this

treatment of aneurism by compression should be honestly examined and fairly tried, not only by the surgeons of Dublin, but by those of the world at large; the result we believe will be, that it will become an established method of treatment in selected cases. To those who desire to ascertain the present state of this very important question, we cannot afford more useful aid than by directing them to Mr. Tufnell's book. They will there find the subject most fully, scientifically, and candidly discussed.

Proceedings of Societies.

EPIDEMIOLOGICAL SOCIETY.

August 4, 1851.

THE last meeting of the first session of this Society was held this day at the house of the Royal Medical and Chirurgical Society, 53, Berners Street,—Dr. BABINGTON in the Chair.

After the usual routine of business, the President announced to the meeting that the report of the Common Lodging Houses Committee had been presented to the Council, and received by them, to be made such use of as shall seem best to the President and Members of that Committee.

During the meeting, the President stated that, although there would be a cessation of the ordinary meetings of the Society till November, yet the various Committees would continue in active operation, and invited communications from Members and others on the subject of Epidemic diseases generally, to be forwarded for the Society to the Honorary Secretaries, 38, Berners Street.

The paper announced to be read at the reassembling of the Society on the first Monday in November, is “On Epidemic Diseases in Iceland,” by Dr. Robt. Gordon Latham.

At the usual period of the meeting, Dr. McWilliam, one of the Honorary Secretaries, was called upon by the President to read Mr. Grove's paper

On the Nature of Epidemics.

MR. GROVE commenced his paper by quoting a saying of the Rev. Sydney Smith, that “words are an amazing barrier to the reception of truth,” which he applied to miasmata, mephitic vapours, morbid poi-

sons, and their synonyms, remarking that they were words in common use, but that they conveyed no definite meaning to the mind. He then said that the object of his communication was to elucidate that view which held that the poisons inducing epidemic, endemic, and infectious diseases, must be ranked among the things endowed with life. He argued that the faculty of reproduction was a distinctive mark between animation and mechanism, or between living and inanimate matter; that it was during the reproductive period of existence that the most energetic operations of the vital force were manifested; and that it was during the reproduction of the poison germs within the body that the force of diseased action called for our special attention. He called attention to the fact, that, whether we examine an epidemic or infectious disease of plants, of animals, or of man, we find that the essence of the affection is something which has the power of reproducing its species.

Taking, then, this faculty of reproduction as indicative of the existence of a germ, the author classed the agents of disease among living things, and regarded reproduction as the primary law.

Mr. Grove then argued that, if this were a correct interpretation of nature, the germs of disease ought to acknowledge obedience to the same subsidiary laws which regulate or influence animate existences. He divided these laws into the objective and subjective; the former referring to faculties, or properties inherent in the germ, the latter referring to the action of external agents and influences upon them. The laws named, ten in number, are not intended as absolutely definite expressions of a comprehensive idea, but merely as the readiest approximations.

Objective Laws.

1. The diffusion or dispersion of germs.
2. Their static existence.
3. Duration of active existence.
4. Period of development.
5. Intermittent reproduction.

Subjective Laws.

1. Seasons of activity.
2. Climatic influence.
3. Relation to latitude.
4. Subjection to physical forces.
5. Influence of locality.

The application of these laws to the agents of disease was demonstrated, and their analogies traced in the vegetable and animal kingdom. He further showed that, upon this mode of explaining the phenomena of infections, little else was required to solve some of the most difficult problems connected with them.

Having shown the impossibility of accounting for epidemics and infection upon the chemical basis—seeing that in no purely chemical process was there any multiplication of the agents, and that, as far as the physical forces were concerned, one always increased at the expense of the other, as heat increases by the chemical change taking place in combustible bodies—the author concluded by drawing attention to the Registrar-General's Return of Deaths for the year 1847, by which it might be seen that, as 97,924 deaths were due, nearly one-fourth of the total mortality was attributable to causes especially demanding the attention of this Society; and, if we were allowed to include consumption, considerably more than one-third, the numbers being, of the diseases mentioned, 151,241, and the total mortality for the year 453,723.

Dr. Babington, Dr. Silvester, Dr. Snow, Mr. Charles Cochrane, and Dr. M'William, joined in the discussion.

A vote of thanks was accorded to Mr. Grove, in his absence from the meeting, for his interesting paper.

ACADEMY OF MEDICINE, PARIS.

July 22, 1851.

Prophylaxis of Syphilis.

DR. LANGLEBERT announced to the Academy that he had discovered a substance capable of destroying the effects of the syphilitic virus. This preservative consists of a strong alcoholic solution of soap, having an excess of alkali. Dr. Langlebert had performed several experiments by inoculating with the poison of chancres, and then applying his antidote within about five minutes afterwards. The effects of the virus had in every case disappeared.

Pellagra.

M. LONDE communicated, from Dr. Hameau, a physician at Teste, the statement that he had observed pellagra among the shepherds of his neighbourhood. A disease very similar is met with among the sheep. Dr. Hameau had watched one patient, suffering under pellagra, during eleven years (from 1818 to 1829). Since that time he had traced the disease in the country from the mouth of the Gironde to that of the Adour, and from the Garonne to the Ocean, over an extent of seven hundred leagues. At least half the agricultural population are the victims of this scourge, and the greater portion die in the prime of life, without any other apparent

disease. The most insurmountable obstacles present themselves to the aid that medical men would render to these poor creatures, as it would be necessary that they should bear all the expenses of their support and medical treatment. Dr. Hameau had proposed that a hospital should be established for these cases, but he had met with no encouragement.

The Therapeutic Action of Arsenic in Diseases of the Skin.

M. GIBERT presented an essay on this subject, by M. Emile Marchand, of Sainte-Foy, Gironde. The author had treated obstinate chronic cases of prurigo, mentagre, and psoriasis, by arsenic, entirely without topical applications, and had been enabled, by sufficient lapse of time, to judge of the permanency of the cure.

Medical Intelligence.

UNIVERSITY OF LONDON.

M.B. FIRST EXAMINATION.—1851.
PASS EXAMINATION.

Monday, August 4.—Morning, 10 to 1.

Anatomy and Physiology.

Examiners, Mr. KIERNAN and Prof. SHARPEY.

1. Give the anatomy of the Elbow-Joint, describing the articular ends of the bones, the ligaments, and the synovial membrane. Mention the movements which take place at this articulation, and the muscles by which they are effected.

2. The Pharynx being opened posteriorly in the middle line and in its whole length, describe the parts brought into view in the order in which they are seen from the basilar process to the lower margin of the cricoid cartilage. The mucous membrane being removed, describe the parts then exposed. The answer to include an account of the form and structure of the soft palate and its arches, the tonsils, and the interior of the larynx.

3. Describe the parts which would be exposed in tracing by dissection the Peroneal Nerve and its branches, from the upper part of the Popliteal region to their termination.

4. Give an account of the structure, course, and connections of the large intestine from its commencement to its termination, describing the Ilio-colic Valve, and noticing specially the points in which the large differs from the small intestine. In your account of the Rectum, describe its

relations to the adjacent parts in the two sexes.

5. Describe the external configuration, the position, and the internal structure of the Teeth in the adult.

Afternoon, 3 to 6.

Anatomy and Physiology.

Examiners, Mr. KIERNAN and Prof. SHARPEY.

1. Describe that portion of the base of the Cranium which is bounded anteriorly by the suture uniting the horizontal plates of the superior maxillary and palate bones, and by the anterior margins of the pterygoid processes, posteriorly by the superior transverse ridge of the occipital bone, and laterally by the ridges separating the zygomatic from the temporal fossæ, and by the posterior roots of the zygomatic processes of the temporal bones. Commence the description at the anterior part; mention the openings, with the parts occupying them, and the attachments of muscles and ligaments in the order in which they are seen.

2. Describe, in the order of their occurrence, the parts met with in exposing the course and distribution of the Suprascapular and Circumflex Nerves: the dissection to be commenced at the upper and back part of the shoulder, and carried from behind forwards as far as the point where the circumflex nerve passes the lower border of the Subscapularis muscle.

3. State the steps of the dissection required to display the Facial Artery and its branches (except the palatine and tonsillar); mentioning the other parts exposed in the dissection, and pointing out their relation to the vessels in question.

4. Describe the parts seen in the right auricle and right ventricle of the Heart. Mention the peculiarities of the heart and pulmonary artery of the Fœtus.

5. Give an account of the Cellular or Areolar Tissue; describing its structure, its physical and vital properties and chemical composition, the varieties which it presents in different parts, and its mode of distribution in the body.

Tuesday, August 5.—Morning 10 to 1.

Chemistry.

Examiner, Professor BRANDE.

1. Enumerate the preparations of Lead of the London Pharmacopœia, giving their respective formulæ, and modes of manufacture or preparation.

2. How are *nitrate*s detected in spring water, and what is their probable origin?

3. What are the proximate components of *Opium*? Give an outline of its qualitative analysis, and of the preparation and

chemical properties of *Morphia*, and its principal Salts.

4. Enumerate the principal alloys of *Copper* used in the arts, and give directions for their quantitative analysis.

5. Give the *equivalents* of the following substances, and the *formulae* of their several compounds with oxygen :

| | |
|-------------|------------|
| Chlorine. | Manganese. |
| Sulphur. | Iron. |
| Phosphorus. | Antimony. |

Tuesday, August 5.—Afternoon, 3 to 6.

Materia Medica and Pharmacy.

Examiner, DR. PEREIRA.

1. What are the chemical changes which Citrate of Potash, Tannic Acid, Salicine, and Ammonia respectively suffer in their passage through the system?

2. Give a botanical description of *Atropa Belladonna*; and describe its medicinal effects and uses. Give a sketch of the properties and uses of *Atropia* and its *sulphate*.

3. Describe the process for making the *Ferri Ammonio-Citras*, Ph. Lond.; and explain the successive steps of the operation. State the per-centage quantity of sesquioxide of iron which this salt yields when decomposed by potash.

4. In the *London Pharmacopœia* for 1851, it is stated that "*Potassii Iodidum* in spiritûs rectificati partibus sex vel octo, in aquâ copiose liquatur. Hæc aqua curcumæ colorem vel non omnino vel levissime modo in fuscum mutat; lacmi colorem non mutat; acido nitrico et amylo simul adjectis, cœrulea fit; acido tartarico cum amylo adjecto, non coloratur. Quod ex eâdem a plumbi acetate demittitur, flavet, et in aquâ fervente liquatur: nihil autem decidit adjecto vel liquore calcis vel barii chlorido. Præterea, si id quod per argenti nitratem demittitur, in liquore ammoniæ fortiori digeratur, dein liquori colato acidum nitricum adjicias, nihil inde deiciatur. E granis 100 in aquâ liquatis, adjectâ argenti nitrato, demittuntur argenti iodidi grana 141."

You are requested to explain this paragraph, and point out what particular indications these properties respectively furnish.

5. What office does *Silex contritus* serve in the preparation of the "*Aquæ*" of the *Pharmacopœia Londinensis*? And what are the objections to the use of Sugar, Spirit, or Carbonate of Magnesia, in the preparation of these waters?

6. Briefly state the Effects, Uses, and Doses of the following preparations of the *London Pharmacopœia* for 1851:—

- Liquor Arsenici Chloridi.
- Syrupus Ferri Iodidi.
- Tinctura Lobeliæ Ætherca.
- Tinctura Quinæ composita.
- Tinctura Conii.

Wednesday, August 6.—Morning, 10 to 12.

Botany.

Examiner, Rev. Prof. HENSLow.

1. Define the terms Capitulum, Achlamydeus, Superior, Discus, Pyxidium, Hilum.

2. Describe (in the order in which they are numbered) the plants on the Table, confining yourself strictly to the following scheme so far as it may be applicable to the several specimens.

- (a.) STEM. General Character.
- (b.) LEAVES. Arrangement.
- (c.) ———. Stipulation.
- (d.) ———. Composition.
- (e.) ———. Form.
- (f.) ———. Margin and incision.
- (g.) ———. Venation.
- (h.) INFLORESCENCE. General Character.
- (i.) ———. Bracteal appendages.
- (j.) FLOWER. Peculiarities of Calyx.
- (k.) ———. ——— Corolla.
- (l.) ———. ——— Stamens.
- (noticing insertion).
- (m.) ———. Disk.
- (n.) ———. Pistil, (as to Ovary, Style, Stigma, Placentation.)
- (o.) A brief sketch of the chief characteristics of the Order to which the Plant belongs.

THE FELLOWSHIP WITHOUT EXAMINATION
—MEMORIAL TO SIR GEORGE GREY.

To the Right Honourable Sir George Grey, Bart., Her Majesty's Secretary of State for the Home Department.

The humble Memorial of the undersigned Members of the Royal College of Surgeons of England practising in Manchester and its vicinity,

Sheweth,—That, while your memorialists express their pleasure at the concessions recently made by the Council of the College to its members, they cannot allow the opportunity to pass without testifying their dissatisfaction at the position in which your memorialists will be placed by the carrying out of the Charter of 1843, as at present proposed.

That the denying to your memorialists the privilege of being admitted to the Fellowship, after the proposed term of membership, without examination, while it is granted to all gentlemen who have been fifteen years members of the College, and whose diplomas dated as such previous to the granting of the Charter of 1843, will operate upon your memorialists with manifest injustice, since your memorialists, for several years previous to that time, entered upon a much more extensive curriculum of surgical education in the hope of holding a guaranteed

position in the College, and of which position your memorialists will be unjustly deprived by being placed in a lower grade in the profession.

That this retrospective operation of the Charter is contrary to the usual practice of the College, since students registered as such, and preparing for examination, have never been made amenable to laws passed after the commencement of their studentship. And your memorialists beg to assure you, sir, that they have no objections to the examination as a test of merit for the fellowship, simply considered as such; yet, if this distinction is to be granted to any gentleman without examination, after a certain term of membership, your memorialists believe that their claim to that privilege, upon every ground of equity and fairness, is unanswerable.

Your memorialists therefore respectfully beg you, sir, in any measure which you may be pleased to propose on behalf of Her Majesty's Government, to allow all gentlemen who commenced their surgical studies before the grant of the Charter in 1843, and who have subsequently been admitted to the Fellowship upon the same terms as those gentlemen who were members of the College at the period of the promulgation of the Charter.

Your memorialists also beg to state that they will have no objection to pay such fee as the Council of the College may think necessary; and your memorialists further desire to assure you of their continued attachment to the College, and of their wish for its prosperity and dignity, and to manifest their repugnance to the establishment of any rival body, yet, at the same time, with every feeling of respect, to express that your memorialists can never rest satisfied that justice has been accorded to your memorialists unless their prayer be approved and granted.

And your memorialists will ever pray.

Peter Royle, 21, Lever Street, Piceadilly; John Walsh, 36, Oldham Road; Joseph M'Keand, 107, Grosvenor Street; George Morley Harrison, 59, Dale Street; George M. Burton, 83, Grosvenor Street, Chorlton-on Medlock; R. Bellhouse Midwood, Grosvenor Square; James Rhodes, 61, Dale Street; James Ogden Fletcher, 24, Dale Street; George Vause Birks, Grosvenor Square; Joseph Edmund Koystra Nadin, 14, Vine Grove, Hulme; John Wells Wainwright, Burlington Street; Robert Manners Mann, 9, Tonman Street, Haymarket; Edmund Lund, 22, St. John's Street; John Shepherd Fletcher, 27, Lever Street; William Hall, 7, St. Stephen's Street, Salford; Thomas Kay Holland, 101, Greengate, Salford; Alexander Somers, 27, St. Stephen's Street, Salford;

Henry Winterbottom, 66, Great Ducie Street, Strangeways; Royden Jackson, 270, Great Ancoats Street, Manchester; Samuel B. Bennett, 182, Oxford Street, Chorlton-on-Medlock; Henry Merrill Williamson, Dispensary, Chorlton-on-Medlock; James Jodrell Cooke, Hope Street, Piceadilly.

August 2, 1851.

CHOLERA IN THE GRAND CANARY.

TENERIFFE, July 1.—Unhappily the cholera continues to rage with undiminished violence; for, though the number of deaths in the capital is considerably lessened, it is owing solely to the population being now so much thinned, while the disorder having spread to almost all the other towns in the island is producing a degree of mortality unwitnessed under similar visitations in any other part of the globe. By the last accounts the deaths in Galdar, a place with about 2,500 souls, range from 40 to 50 per day; and this is but one example of what happens in the rest. In numerous instances death ensues within three hours from the first attack; if the patient survives the third day, there is a hope of recovery. Many families have entirely disappeared from the world, and others have been most fearfully reduced. One of highest respectability there, that of Casabuena, had lost five of its members up to the 21st ult., and we know not what may have been the subsequent fate of the remainder.

The medical men, of whom three have died out of the four that were in the city, have been quite unable to classify the epidemic, which evidently is not the known cholera, the patients previous to death becoming spotted with purple and much swollen, as well as the corpses, and the eyes bursting out of the sockets. Some consider it a typhoidal cholera, and others, with great reason, believe it to be a disease brought into Canary in January last through the illicit importation of a quantity of wool from the coast of Africa by a fishing vessel. Certain it is, that ever since that period there has been mortal sickness progressively increasing there, until the full heat of summer, aided by want of attention and other causes, has brought it to its acme. Our alarm, as may well be supposed, is very great: hitherto, thank God, our island continues free from infection, and every precaution is taken to prevent intercourse with Canary except through the quarantine vessel employed by Government to bring over the weekly report.

REMARKABLE RECOVERY FROM A SEVERE GUNSHOT WOUND.

ONE of the most interesting cases of recovery from a severe gunshot wound,

occurred lately at the Naval station of Bassadore, in the Persian Gulf. While the H. C. Brigantine *Tigris* was lying there in the month of February last, one of her midshipmen, Mr. Fendal, had proceeded on shore for a day's shooting; and most unhappily, when in the act of drawing it towards him by the muzzle, his gun accidentally exploded, and its contents lodged in his left shoulder. As the muzzle was at the time within a few inches of his breast, the injury sustained was of the most frightful character. The upper part of the arm was nearly blown from the body, the bone badly broken, and the pellets of shot driven in about the shoulder and front of the chest. The loss of blood that ensued was so profuse that in a few minutes he sank exhausted, and in this fainting state was carried to the nearest house. It unfortunately happened at the time that there was no surgeon attached to the vessel: however, the hospital assistant succeeded, by application of tourniquets and bandages, in stopping the flow of blood. In this state of matters, Lieut. Manners, who was commanding, despatched his vessel across to the Arabian Coast, where he knew the steam-frigate *Auckland*, carrying the only surgeon there attached to the Gulf squadron, was at that time cruising; and by a very fortunate hit, fell in with that ship at the hour of midnight, as she was proceeding on her voyage from Sharjee to Bahrein. The assistant-surgeon in charge, Mr. Crawford, was aroused from his bed, despatched at once on board the *Tigris*, and was carried with all alacrity to Bassadore, where the wounded midshipman still lay. Upon arrival at the scene of suffering, he immediately proceeded to a careful examination of the wound, and, having concluded that amputation at the shoulder-joint was inadmissible, he adopted such measures as appeared to him necessary for the preservation of life. Matters for the first fortnight were progressing favourably, and his exertions were encouraged by the improving state of the patient, when unhappily secondary hæmorrhage of the most violent character set in. The first bleeding took place about two o'clock in the morning, but luckily Mr. Crawford slept in the house, and being upon the spot, adopted such measures as soon stopped the flow of blood. In a few days the patient was again going on well, when exactly one week from the first bleeding, a second, much more profuse, and threatening death in a few seconds, occurred at midnight. The gush of blood was temporarily arrested, but Mr. Crawford found that it proceeded from an injury to the axillary artery near the collar bone, and that the only hope of preserving the life of the patient was to perform the

operation of tying the subclavian artery as it runs under that bone. Although without assistance, Mr. Crawford proceeded at once to the operation, and succeeded in a few minutes in achieving his object. By the administration of suitable restoratives, and a steady course of judicious treatment, the patient gradually revived, and everything connected with the operation succeeded so favourably, that after the expiration of five or six weeks his health and strength were almost re-established. Shortly after this accident the *Tigris* was ordered upon some pressing duty, so that Mr. Crawford was left in charge of his patient, without the society of any other European at the station, and during this interval he was forced to undertake another rather severe operation upon the bones of the wounded arm, by which he hoped to preserve that member; and now not only is the sufferer restored to strength again, but the wound is nearly well, and there is much hope that the arm will still be a very useful one. The operation of tying the subclavian artery is but of modern date in surgery, and was for the first time attempted by Ramsden, at Bartholomew's Hospital, in 1809: the patient died five days after the operation. Afterwards by Sir W. Blizard, Dupuytren, Colles, Sir A. Cooper, and other eminent surgeons; the patients all dying about the fourth day after operation. The first successful case occurred in the hands of Dr. Post, of New York, in the year 1817, and the next instance was in 1820, when Mr. Liston was the operator. Since then there have been occasional rare cases, but those of a favourable termination enumerated by surgical writers form but a small number, and it is therefore a source of much pleasure to us to be able to add one to the list from the presidency of Bombay. We believe, moreover, that this is the first case of the kind that has happened in India; and when we consider that the operation was performed at midnight, the patient in a most inconvenient position, upon a bed from which he dared not be moved, and without the aid or advice of a professional brother, we can have little hesitation in pronouncing the result to be most creditable to the operator.—*Bombay Journal*.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 1st August, 1851:—Frank James Wilson Packman, Puckeridge, Herts—Henry Seattle, Ulverstone, Lancashire—Alexander Fraser Bayne, Reading—Julius Wiles, Hitchin, Herts.

BOOKS & PERIODICALS RECEIVED

FOR REVIEW

DURING THE LAST TWO WEEKS.

- Della Elmintiasi, nelle sue Relazioni colla Occulistica del Cav. R. C. Salvatore Alessi. Roma, 1850.
- A Practical Treatise on the Management of Diseases of the Heart, &c. By Norman Chevers, M.D. Civil Assistant-Surgeon, Chittagong.
- On the Local Origin of the Yellow Fever Epidemic of British Guiana. By John Davy, M.D. F.R.S. &c.
- Observations on the Site and Construction of Hospitals. By Sir George Ballingall, M.D. F.R.S.E.
- The Histories of the Colleges of Physicians and Surgeons, and of the Apothecaries' Company.
- Was the Roman Army provided with any Medical Officers? By J. Y. Simpson, M.D. F.R.S.E.
- Letter to Professor J. Y. Simpson on Homœopathy. By W. Macleod, M.D. F.R.C.P.
- Rules and By-Laws of the Clerkenwell Medico-Ethical Society.
- Letter to the Earl of Shaftesbury on the Medical Inspection of certain Trades. By J. B. Harrison, M.R.C.S.
- London Journal of Medicine. August, 1851.
- Edinburgh Monthly Journal of Medical Science. August 1851.
- Pharmaceutical Journal. August 1851.
- The Upper Canada Journal of Medical, Surgical, and Physical Science. July.
- Annales d'Hygiène et de Médecine Légale. Juillet 1851.
- Journal de Chimie Médicale. Août 1851.
- Comptes Rendus. No. 26, Juin 30; Nos. 1, 2 et 5, Juillet 7, 14 et 21.
- Casper's Wochenschrift für die gesammte Heilkunde. Nos. 25 to 29, 21 June to 19 July, 1851.

AMERICAN PUBLICATIONS.

- A Practical Treatise on the Diseases and Injuries of the Urinary Bladder, the Prostate Gland, and the Urethra. By S. D. Gross, M.D. &c. With 106 Illustrations. Philadelphia, 1851.
- Charge to the Graduates of Jefferson Medical College, of Philadelphia Delivered March 8, 1851. By Prof. T. D. Mütter.
- New York Journal of Medicine and the Collateral Sciences. By J. S. Purple, M.D. July, 1851.
- The Medical Examiner and Record of Medical Science. By Drs. Smith and Biddle. July, 1851. Philadelphia.
- The Photographic Art-Journal. July, 1851. New York.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Aug. 2.

| BIRTHS. | | DEATHS. | |
|-----------|-----|-----------|-----|
| Males.... | 773 | Males.... | 512 |
| Females.. | 678 | Females.. | 498 |
| 1451 | | 1010 | |

CAUSES OF DEATH.

| | |
|--|------|
| ALL CAUSES | 1010 |
| SPECIFIED CAUSES | 1006 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 333 |
| <i>Sporadic Diseases, viz.—</i> | |
| 1. Dropsy, Cancer, &c. | 38 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 107 |
| 4. Heart and Bloodvessels..... | 36 |
| 5. Lungs and organs of Respiration | 84 |
| 6. Stomach, Liver, &c. | 71 |
| 7. Diseases of the Kidneys, &c. | 5 |
| 8. Childbirth, Diseases of Uterus, &c. | 11 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 8 |
| 10. Skin..... | 2 |
| 11. Premature Birth..... | |
| 12. Old Age | 41 |
| 13. Sudden Deaths..... | 2 |
| 14. Violence, Privation, Cold, &c.... | 27 |

The following is a selection of the numbers of Deaths from the most important special causes:

| | | | |
|--------------------|-----|------------------|-----|
| Small-pox..... | 15 | Convulsions..... | 38 |
| Measles..... | 24 | Bronchitis | 39 |
| Scarlatina | 14 | Pneumonia | 33 |
| Hooping-cough | 37 | Phthisis | 122 |
| Diarrhœa..... | 143 | Lungs | 5 |
| Cholera..... | 12 | Teething | 11 |
| Typhus..... | 53 | Stomach | 5 |
| Dropsy | 12 | Liver..... | 10 |
| Hydrocephalus | 32 | Childbirth | 4 |
| Apoplexy | 22 | Uterus..... | 6 |
| Paralysis | 24 | | |

REMARKS.—The total number of deaths was 17 below the average mortality of the 31st week of ten previous years. Of the 143 deaths from diarrhœa, 119 occurred among children.

METEOROLOGICAL SUMMARY.

| | |
|---|-------|
| Mean Height of the Barometer | 29.76 |
| Self-registering do. ^b Thermometer ^a | 63.4 |
| Max. 86° Min. 41° | |

^a From 12 observations daily. ^b Sun.

RAIN, in inches, 0.26.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 2° above the mean of the month.

NOTICES TO CORRESPONDENTS.

- We are obliged to Dr. R. M'Gregor for the continuation of his Cases in Clinical Medicine: they will have early insertion. We shall be happy to receive additional reports.
- Dr. A. W. Barclay.—The Cases of Severe Lesion of the Brain will be acceptable.
- Dr. E. Wells.—A copy was forwarded.
- Mr. Dunn's paper will be inserted in the following number.
- Mr. Hugh Doherty.—An answer will be sent.
- We have to thank Dr. F. J. Brown for his Case of Purulent Infection. It shall be published very shortly.
- Dr. Gardner's Case of Aneurism of the Aorta has come to hand.

Lectures.

LECTURES

ON

TUMOURS,

Delivered in the Theatre of the Royal College of Surgeons of England.

BY JAMES PAGET,

Professor of Anatomy and Surgery to the College.

LECTURE VII.

Osseous Tumours.—Their occurrence in soft parts—their varieties when connected with bones; cancellous, and compact or ivory-like exostoses—general and microscopic characters of each form: their respective origins, and correspondences with the bones on which they grow—particular illustrations of the cancellous tumour; and of the compact, in its several forms, about the frontal and other cranial bones, the lower jaw, and the long bones: their occurrence, also, in other mammalia; peculiar osseous tumours on the phalanges of toes.

Principal examples of osseous outgrowths, as distinguished from tumours; on the bones of the face and head; within the tables of the skull; on the femur, &c. Multiple osseous growths; peculiarity of diathesis; distinction of osseous from osteoid growths, and from growths of bone connected with cancer.

MUCH of what concerns the osseous tumours was stated in the last lecture: for, indeed, many of them are only examples of another state of the cartilaginous tumours to which that lecture was devoted. Still, it may be desirable to speak of the characters of such tumours as, whether derived from cartilage or not, are found wholly, or almost wholly, composed of bone.

Osseous tumours, even more generally than cartilaginous, are connected with the bones, with which, moreover, though they may have the other characters of tumours, they are always continuous, after the manner of outgrowths. They are, however, occasionally found in soft parts, as distinct and discontinuous tumours, invested with fibro-cellular capsules. Thus, in the College Museum*, is a small, completely osseous tumour, formed of soft cancellous tissue with medulla, which lies over the dorsal surface of the trapezial and scaphoid bones, completely isolated from them and all the

adjacent bones. In the Museum of St. George's Hospital is a tumour formed of very compact bony tissue, which lay over the palmar aspect of the first metacarpal bone, loosely imbedded in the fibro-cellular tissue, and easily separated from the flexor tendons of the finger†. It had been growing five years in a middle-aged woman. So, but rarely and imperfectly, the cartilaginous tumours over the parotid gland are ossified;‡ and those in the lungs§ and testicle.

At present these isolated osseous tumours are interesting for little more than their rarity. It is to those connected with bones that I must now particularly address myself.

I have already said that all these have the character of continuous growths; that they are like outgrowths rather than tumours. And it is not easy to draw any line of distinction between what deserve to be considered as tumours, and such accumulations of bone as may ensue in consequence of superficial inflammation or other disease of the bone or periosteum. The exostoses and the hyperostoses of nosology are not to be severally defined without artifice; but, in general, we may take this as a convenient, and perhaps a just method of dividing them: namely, that those may be reckoned as osseous tumours, or outgrowths of the nature of tumours, whose base of attachment to the original bone is defined, and grows, if at all, at a less rate than their outstanding mass.§ Those which are not of the nature of tumours are generally not only ill-defined, but widely spread at their bases of attachment, and the additions made to them increase their bases rather than their heights or their whole masses.

Of osseous tumours, thus roughly defined, two chief kinds may be observed; namely, the cancellous, and the compact or ivory-like, which, speaking generally, may be said to resemble respectively the medullary tissue, and the walls or compact substance of healthy bone. In both alike the bone is usually true and good bone. By my own observations of it I know no more than this; but Mr. Quckett, who has submitted to microscopic examination portions of all the osseous tumours in the Museum, confirms the general statement in all particulars. In different specimens there may be varieties in the proportion and arrangement of bloodvessels, and in

* An account of it is reported in the Medical Times, Aug. 3, 1850.

† Museum Coll. Surg., No. 204.

‡ Museum of St. Thomas's Hospital.

§ Mr. Stanley particularly remarks this in relation to operations for removal of exostoses (On Diseases of the Bones, p. 150.)

the size and development of the corpuscles and their canals, but the proper characters of the bone of the species in which the tumour occurs are not far departed from.

I believe the homology of the osseous tumours is, in chemical qualities, as perfect as it is in structure; and that, as with the natural bones, so with these, we may not ascribe differences of hardness or density to the different proportions of the animal, and the saline and earthy components, but to the different manner in which the similar material that they compose is, in different specimens, compacted. Their varieties of hardness depend on mechanical rather than on chemical differences.

Of the general methods of ossification of cartilaginous tumours I spoke in my last lecture, and then noticed that in nearly all cases when the ossification of the tumours is completed, they consist of a very thin layer or wall of compact tissue, covering in a mass of cancellous and medullary substance: and thus they are composed, whether the cartilage-growth began within or upon the bone. It is probable that, in some instances, the hardest osseous tumours may be also formed by transformation of cartilage into bone. Thus, an exceedingly hard ivory-like tumour at the angle of the lower jaw, in the Museum of the College,* has so exactly the nodular and irregularly spheroidal shape belonging to cartilaginous tumours, and to the rare cancellous bony tumours in the same part, that we can scarcely doubt it had a primordial cartilaginous condition. So, too, Professor Goodsir tells me there is in the Museum of the University of Edinburgh a tumour of the humerus, half of which is as hard and compact as ivory, and half is cartilaginous. In the Museum of Guy's Hospital there is a somewhat similar specimen: in which, however, the hardness of the bone may be due to inflammatory induration of an ordinary cancellous osseous growth.

These, however, are probably exceptions to the general rule concerning the compact or ivory exostoses; for, for the majority of these, Rokitsky says truly that no preparatory cartilage is formed. As, in the natural ossification of the skull, the bone is formed, not in a matrix of cartilage, but in fibrous tissue, layers of which are successfully ossified, so probably are the hard bony tumours of the skull formed.

The general characters of the cancellous bony tumours are so nearly described in the account of the cartilaginous tumours

from which they originate, that I need only briefly refer to them. They usually affect a round shape, with projecting lobes or nodules, which answer to those of the conglomerate cartilaginous tumours, and are often pointed or angulated. They may, however, be very smooth on their surface, whether they have grown within bones whose extended walls form now their outer layer, or without them under the periosteum. When completely ossified, their respective tissues, compact and medullary, are usually continuous with those of the bone on which they are planted; and the later periods of growth seem attended with such mutual adaptation as may tend towards making one continuous, though deformed, mass of the old and the new bone.

The singularities of position in which the osseous tumours may be found, and the important hindrances that may result from their interference with adjacent parts, I need not detail; they are amply enumerated by Mr. Stanley.

Of their rates of growth little is known, but I believe that when a cartilaginous tumour is completely ossified, the growth of the bony tumour is extremely slow. However, osseous tumours may be found of an enormous size. The largest that I know is in the Museum of the College.* It nearly surrounds the upper two-thirds of a tibia, in an irregularly oval mass, with a nodulated surface, almost entirely covered in by a thin layer of compact tissue, and cancellous in all its interior. It measures exactly a yard in its circumference, and the limb, which was amputated by Mr. Gay, a former surgeon of St. Bartholomew's Hospital, weighed 42 pounds.

Another tumour of large size is in the Museum of the same Hospital.† A great nodulated mass of bone is attached to the ischium and pubes, and formed part of a tumour of which the rest was nodulated cartilage.

The compact, hard, or ivory-like bony tumours occur especially about the bones of the head, and present several diversities of form. Some are uniform and simple; others variously lobed, or nodular. The simple tumours are commonly attached to the skull by narrowed bases, over which their chief masses are prominent on one side, or all round. A good specimen of this kind is in the Museum of St. Bartholomew's Hospital,‡ which shows besides that

* No. 3220. It is engraved in Cheselden's *Osteographie*, Tab. 53, f. 123.

† Series I A. No. 133, and Series I, No. 118.

‡ Series I. 71. Ser. I. A. 124 in the same Museum, and No. 3215 in the Museum of the College are nearly similar specimens.

* No 1035: compare it with a cancellous tumour of the same form, in the Museum at St. George's Hospital, removed by Mr. Tatum.

these tumours may consist of an exterior hard, and an interior cancellous, tissue, respectively resembling, and continuous with, the outer table and the diploe of the skull. Some of these hard tumours have the shape of biconvex lenses, resting with one convex surface on the skull; and of such as these more than one may be often found on the same skull.*

A much more formidable disease than these present exists in the nodulated and larger hard bony tumours about the bones of the skull. These are not like outgrowths from the outer table and diploe; for they often, or I believe usually, grow first between the tables of the skull, or in the cavities of the frontal or other sinuses. Increasing in these parts, they may tend in every direction, penetrating the tables of the skull, and forming large masses, projecting as much into the interior of the skull as on its exterior.

The most frequent seat of such tumours is in the frontal bone, especially about its superciliary and orbital parts, and they are horrible by their pressure into the cavities of both the cranium and the orbit, compressing the brain, and protruding one or both eyes.

I have here some examples of the disease. Its characters, so far as the growth is concerned, are best shown in a huge mass which grew from the forehead of an ox, originating apparently in the frontal sinuses.† It is like a great spheroidal mass of ivory, measuring $8\frac{1}{2}$ inches in diameter, and weighing upwards of sixteen pounds. Its outer surface, though knobbed and ridged, is yet compact like an elephant's tusk; and, in similar likeness, its section shows at one part a thin investing layer, like the bone covering the ivory. It is nearly all solid, hard, close-textured, and heavy; only a few irregular cavities, and one with smooth walls, appear in its interior, and one may trace the orifices of many canals for blood-vessels. Mr. Quckett found that this tumour had a higher specific gravity than any bone, except that which is found in what are called the porcellaneous deposits or transformations of bone in the heads of bones affected with chronic rheumatism. But it has in every part the structure of true bone.

Just like this, in the general characters of their tissue, are the hard bony tumours from the human frontal bone. In one, an Hunterian specimen,‡ such a tumour,

$2\frac{1}{2}$ inches in diameter, deeply lobed and knotted, fills the frontal sinuses and the upper part of the left orbit, encroaches into the right orbit, and projects for nearly an inch on both the surfaces of the skull. It appears to have originated in the ethmoidal or frontal cells, and, in its growth, to have displaced and destroyed by pressure the adjacent parts of the tables of the skull and the wall of the orbit. It is, for the most part, as hard as ivory, but in its central and posterior portion is composed of very close cancellous tissue.

A specimen, far surpassing this in size, but resembling it in all its general characters and relations, is in the Museum of the University of Cambridge. It is the largest and best specimen of the kind that I have seen, and its osseous structure is distinct; only, as Professor Clark has found, it is irregular: in the hardest parts there are neither Haversian canals nor lacunæ; in the less hard parts, the canals are very large, and the lacunæ are not arranged in circles around them; and everywhere the lacunæ are of irregular or distorted forms.

A smaller specimen is in the Museum of St. Bartholomew's Hospital. A girl, twenty years old, was admitted with protrusion of the left eye-ball, which appeared due to an osseous growth projecting at the anterior, upper, and inner part of the orbit. None but the anterior boundaries of this growth could be discerned. It had been observed protruding the eye for three years, and had regularly increased; it was still increasing, and was productive of severe pain in the eye-ball, and about the side of the head and face. It seemed, therefore, necessary to attempt the removal of the tumour, or at least to remove some part of it, with the hope that the disturbance of its growth might lead to its necrosis and separation. A portion of it was with great difficulty sawn off; but the patient died with suppuration in the membranes of the anterior part of the cerebrum.

Now all these cases, corroborated as they are by others upon record, prove the general character and relations of these tumours. Their nodular form, and uniform, hard, ivory-like texture; their growth in the diploe or sinuses as isolated or narrowly attached masses; their tendency to extend in all directions; their raising and penetrating the tables of the skull, and growing out into the cavities of the skull and orbit; all show the exceeding difficulty and peril of operations on these tumours. The simpler kinds, that only grow outwards, may indeed be cut off with advantage, though seldom without great difficulty, and often the attempt to remove them has been made in vain; but these larger and nodular tu-

* Museum Coll. Surg. 793. See also Miller's Principles of Surgery, p. 476.

† Museum Coll. Surg. No. 2316.

‡ Mus. Coll. Surg. 795. It is engraved in Baillie's Morbid Anatomy, Fasc. x. pl. 1, fig. 2; and in Home, Philosoph. Trans., vol. lxxxix. p. 239.

mours about the brow can very rarely be either cut off or extirpated.*

The extirpation, however, which may be impossible for art, is sometimes effected by disease: these tumours are occasionally removed by sloughing. Such an event happened in a case related by Mr. Hilton;† and the great ivory-like mass, clean sloughed away, is in the Museum at Guy's. So, too, in a case by Mr. Lucas, a bony tumour at the edge of the orbit, after growing eight months, was exposed by an incision through the upper eyelid. The wound did not heal, the tumour continued to grow, and twelve months afterwards became "earious," and was detached. The course of treatment which these cases suggest has been, I believe, the only one worth imitation,—namely, exposure of the tumour, and the application, if need be, of escharotics to the surface of the bone.

These hard osseous tumours are very rarely found in connection with any bone but those of the skull. Here, however, is a well-marked specimen in the lower jaw; a nodulated mass, nearly three inches in diameter, invests the right angle of the jaw, and is, in its whole substance, as hard and heavy as ivory. I have already, also, referred to cases of similar hard tumours on the humerus: but they are extremely rare.

Osseous tumours of the lower jaw appear to be less rare in animals inferior to man; for the College Museum contains three specimens,‡ taken respectively from a Virginian opossum, a cat, and a kangaroo; and, which is more singular, one from a cod-fish. In this specimen,§ a disk-shaped mass of bone, two inches in diameter, extremely heavy and compact, is attached to the inner surface of the superior maxillary bone.

In the texture of these very hard bony tumours connected with the bones of the skull and the lower jaw, we may observe an instance of the general law of likeness between tumours and the parts most near to them; for their bone is like no other natural bone so much as the internal table of the skull, or the petrous bone, or inferior maxilla.

The same likeness is observable in the osseous tumours that are frequent on the last phalanx of the great toe, which, alone, now remain for me to speak of.||

No adequate explanation, I believe, can be offered for the occurrence of these

growths. They may be sometimes referred to injury; yet the effects of injury to the great toe are so inconstant, that we cannot refer to injury as other than an indirect cause of the growth of tumours so singularly constant as these are in all their characters, and so nearly without exception limited to the one toe of all that are exposed to injury. They grow almost always on the margin, and usually on the inner margin, of the end of the last phalanx of the great toe; in only one specimen have I seen such a tumour springing from the middle of the dorsal surface of the phalanx; and, in only one, a similar tumour from the last phalanx of the little toe. Growing up from the margin, they project under the edge of the nail, lifting it up, and thinning the skin that covers them, till they present an excoriated surface at the side of the nail. Their growth is usually very slow, and when they have reached a diameter of from one-third to one-half of an inch, they commonly cease to grow, and become completely osseous. They are among the tumours whose independence is shown not only by abnormal growing, but by the staying of their growth when they have attained a certain natural stature.

I believe that they are not uniform in their method of development. In some specimens I have seen no cartilaginous basis; the bone appeared to form in fibrous tissue, as it were following, and at length overtaking, the fibrous growth. In another, the outer part of the tumour was formed of a thin layer of fibrous tissue, and between this and the growing bone was a layer of cartilage which had externally the stellate nuclei, and internally nuclei of ordinary form, among which the processes of bone were extending.

Whichever way the bone is formed, it is like that of the phalanx itself, cancellous but very hard, and with small spaces, and comparatively thick cancelli or laminae bounding them. The outer layer, too, is rough and ill-defined, so that the growth looks like a branch from the phalanx, and, like a branch, is apt to sprout again when cut away, unless at least the end of the bone on which it grows be removed with it.

The account of osseous tumours would be very incomplete if there were not added to it some notice of those growths which are most like them, though they may lie beyond the range of any reasonable or convenient definition of tumours. Among these are certain growths of the bones of the face, tumour-like in their most prominent parts, and yet unlike tumours in that their bases of connection with the bones are very ill-defined, and that from their bases the morbid changes in which them-

* The histories of some specimens in the Museum of St. George's Hospital illustrate these statements very well. See, also, Mr. Hawkins' Lectures.

† Guy's Hospital Reports, vol. i.

‡ Nos. 1036-7-8.

§ No. 1039.

|| Mus. Coll. Surg. 787-8-9, 790.

selves originated extend outwards on the same or even to other bones, gradually subsiding. In no instances can it be plainer than it is in these, that a nosological boundary of "Tumours" must be an arbitrary one.

Such growths as these are not very rare in the superior maxillary bone. Its ascending process may become enlarged and prominent, with an ill-defined hard swelling, very slowly increasing, and sometimes stopping short of any considerable deformity. But a much more formidable disease exists when a large portion of the bone, or the whole antrum, is involved; especially, because this is apt to be associated with diseases in the adjacent bones.

An extreme case is shown in a specimen from the Museum of Mr. Langstaff.* Two large masses of bone, of almost exactly symmetrical form and arrangement, project from the upper jaws and orbits, and have partially coalesced in the median line. They are rounded, deeply lobed, and nodular; nearly as hard and heavy as ivory; perforated with numerous apertures, apparently for blood-vessels. They project more than three inches in front of the face, and an inch on each side, beyond the malar bones; they fill both orbits, the nasal cavities, and probably the antra, and they extend backwards to the pterygoid plates. Part of the septum of the nose, and the alveolar border of the jaw, are almost the only remaining indications of a face. The disease appears to have begun in the superior maxillary bones, and thence to have spread over the bones of the face; similar disease, in a less degree, existing in the bones adjacent to the chief outgrowths.

The patient, who was sixty years old, believed the disease had been eighteen years in progress, and ascribed it to repeated blows on the face. He suffered much pain in the face, eyes, and head. His eyes projected from the orbits: the right, after suppuration and sloughing of the cornea, shrivelled; the left was accidentally burst by a blow. During the last two years of his life he occasionally showed symptoms of insanity, and at last he died with apoplexy of the cerebral membranes.

The disease very rarely attains so horrible a state as is here shown. More commonly it is almost limited to the antrum. In this case it may exist almost without deformity. Here is a specimen† in which both the antra appear nearly filled by the thickening and in-growing of their walls; only small cavities in their centres remain. The new bone is hard, heavy and nearly solid, yet it is porous or finely cancellous,

and is neither so compact nor so smooth on its cut surface as that of the "ivory exostosis." The same disease is manifest in a less degree upon the outer surfaces of the maxillary bones, and on the septum and side-walls of the nose.

The disease has a manifest tendency to concentrate itself in the maxillary bones; so much so that if a case be met with where only one of these bones is diseased, it may be removed with a fair prospect that the disease will not make progress in the adjacent parts. I believe, indeed, that this has been done, with a satisfactory result, in a case where already slight increase of some of the bones near the maxillary was observable: and there was good reason to apprehend the same result in a case on which Mr. Stanley operated. The patient was a girl, 15 years old, in whom enlargement of the nasal process of the superior maxillary bone had been observed for eight years, and was still increasing. It had as yet produced no pain, and no deformity of the cheek, or the orbit, or the palate. But it was regularly increasing; and as it could be certainly anticipated to increase even more in width of base than in prominence, this being the common tendency of the disease, it was thought right to remove the superior maxillary bone while yet the disease was limited to it. The patient died, ten days after the operation, with erysipelas. The specimen displays exactly the same disease as do those last described.

Now it sometimes happens that growths like these spontaneously perish, are separated with the ordinary phenomena of necrosis, and thus are naturally cured. Such an event was observed in a case under the care of Mr. Stanley.

A man, 37 years old, was admitted with a slight convex smooth prominence of the nasal process of his right superior maxillary bone, which he had observed increasing for two years, but which of late had not increased or given him any inconvenience. Indeed, he came to the hospital not for this, but for a swelling of the right gum and the mucous membrane of the hard palate, through fistulous openings in which one could feel exposed dead bone. These had existed for a month. The swelling of the upper process was so characteristic of the disease I am describing as to suggest at once the existence of such a growth; but the suppuration and necrosis threw obscurity on the case; and it was only watched and treated according to such indications as arose, till, after four months, the whole of the mass of bone with which the antrum had been filled up was separated and pulled away.

The appearance of the sequestrum, a

* Mus. Coll. Surg. 3236, A.

† Museum of St. Bartholomew's Hospital, i. 62.

nearly spherical mass of hard, heavy, and finely cancellous bone, an inch or more in diameter, leaves no doubt of the nature of the disease.* The great cavity which remained, opening widely into both the mouth and the nose, gradually contracted, or was filled up, and the man recovered perfectly.

A similar event, I imagine, happened in a man who exhibited himself at most of the Hospitals in London, two years ago, with a great cavity where all his right upper jaw bone and his turbinated bones had once been, and through which one could see the movements of his pharynx and palate. This he said had been left after the separation of a great tumour of bone.

The growths of this kind seem to merge gradually into elevations of cancellous porous bone, which may be found on various parts of the bones of the skull, but of the exact pathology and relations of which we have, I believe, no knowledge. Here are specimens of them, and the Museum of St. Thomas's Hospital is as rich in them as that of the College. In some there are great thickenings of one or both tables of the skull, raising up bosses of new bone from half an inch to an inch in depth, on one or both the parietal bones, or on the occipital or frontal. In some, all the bones of the face are involved in similar changes. In some, similar elevations are produced by growth of bone between the tables, which themselves remain healthy. But, as yet, I believe we can only look at these as strange, inexplicable, and uninformative things.

The last form of bony growths that I need mention, comprises the instances in which numerous exostoses occur in the same patient, and the examples of what has been called the ossific diathesis, or dyscrasia. In the large majority of cases, both cartilaginous and osseous tumours occur singly: a few exceptions might be found among such as I have been describing; but the rule is generally true. But in certain instances a large number of the bones bear outgrowths which, at least in external shape, are like tumours. These are commonly regarded as of constitutional origin; some indeed appear to be so in that sense of constitutional disease which implies a local manifestation of some morbid condition of the blood; but others can be called so only in that sense by which we intend some original and inborn error of the formative tendency in certain tissues or organs.

Of these last we may especially observe

that the tendency to osseous overgrowths is often hereditary, and that its result is a symmetrical deformity. A boy, six years old, was in St. Bartholomew's Hospital, four years ago, who had symmetrical tumours on the lower ends of his radii, on his humeri, his scapulæ, his fifth and sixth ribs, his fibulæ, and internal malleoli. On each of these bones, on each side, he had one tumour: and the only deviations from symmetry were that he had an unmatched tumour on the ulnar side of the first phalanx of his right fore-finger, and that each of the tumours on the right side was rather larger than its fellow on the left.

I saw this child's father, a healthy labouring man, 40 years old, who had as many or even more tumours of the same kind as his son, but of which only a few were in the same positions. All these tumours had existed from his earliest childhood; they were symmetrically placed, and had ceased to grow when he attained his full stature, and since that time had undergone no apparent change. None of this man's direct ancestors, nor any other of his children, had similar growths, but four cousins, one female and three male, children of his mother's sisters, had as many of them as himself.

The swelling on the little boy's fore-finger was an inconvenience to him, and at his parents' request Mr. Lloyd removed the finger. It consisted of an outgrowth or projection of healthy-looking cancellous bone, full of medulla, and coated with a thin layer of compact tissue; its substance being regularly continuous with those of the phalanx itself.

Many similar cases of symmetrical and hereditary osseous outgrowths might, I believe, be adduced;* and all their history suggests that they are to be regarded as related not less closely to malformations, or monstrosities by excessive development, than to the osseous tumours or outgrowths of which I have been speaking. Indeed, at this point the pathology of tumours touches that of congenital excesses of development and growth.

We must distinguish from these cases the instances of multiple ossifications of tendons, muscles, and other tissues, that are occasionally met with; for these only imperfectly imitate the forms of tumours, and are probably connected with such a morbid condition of the blood as really may deserve the name of ossific dyscrasia or diathesis.

Before ending, it may be proper to point out the chief distinctions between the osseous tumours and those growths which are connected with other tumours springing

* The specimen is in the Museum of St. Bartholomew's Hospital.

* See Stanley, On Diseases of Bones, p. 152; and Mr. Hawkins's Lectures on Tumours of Bones, MEDICAL GAZETTE, vol. xxv. p. 474.

from the bones ; for, under the vague name of osteo-sarcoma, many include together, and seem to identify, all growths in which bone is mingled with a softer tissue. The growths that may chiefly need distinction are those of osteoid tumours, and the bony skeletons of certain medullary tumours of bone. Osteoid tumours are probably examples of ossified firm or hard, or fibrous ; and the best marked among them present an abundant formation of peculiarly hard bone. The distinctions usually to be observed between these hard osteoid and the hard osseous tumours are mainly in these particulars :—(a.) the osteoid bone is in its mid-substance like chalk, the osseous like ivory, the one dull and powdery, the other bright and wholly void of friability ; (b.) the osteoid is new bone infiltrated, as it were, in some softer tissue, or in the tissues of the original bone, which disappear as it increases ; the hard osseous tumour is a distinct outgrowth, attached in a comparatively small part of its extent to the bone on which it grows ; (c.) the outer surface of an osteoid growth is porous and rough, and, if laminated, its laminae have their edges directed outwards ; while the outer surface of a hard osseous tumour is smooth and compact, and if laminated, the surfaces of its laminae are directed outwards ; (d.) lastly, the minute characters of bone are far less perfect in the osteoid than in the osseous growth : bone corpuscles existing indeed, but small, round, irregular, with very small, if any, canaliculi, and imbedded in a porous, chalky-looking, basis substance.

And, 2ndly, for distinction between the softer osteoid growths, (with which we may class the osseous skeletons of medullary cancers,) on the one hand, and the cancellous osseous tumours on the other, we may chiefly observe that, (a.) the osteoid tissue and the bone of cancers are more dry and friable than the cancellous bone of the tumours ; and, (b.) the osteoid and the bone of cancerous growths have no medulla, the interspaces between their laminae being filled with cancerous matter ; while medulla is a constant constituent, I believe, of all the cancellous osseous tumours.

Such are the chief differences generally to be observed between the bone of innocent and that of malignant tumours ; differences which it is well to establish, since the fact is sufficiently confusing, that any normal tissue should be formed in subordination to the growth of cancers.*

* Some excellent observations on the subject of the conditions of the proper tissues of the body, when involved in cancers, have just been published by Mr. Humphry, in his Lectures on Surgery, in the Provincial Medical and Surgical Journal.

Original Communications.

ON THE PHYSICAL DIAGNOSIS OF DISEASES OF THE ABDOMEN.

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[Continued from page 199].

PERCUSSION.—*Mode of percussion—Results of percussion in health—liver, spleen, kidneys, &c. Physical signs of disease derived from percussion—liver, spleen, kidneys, &c.—hydatid fremitus.*

AUSCULTATION.—*Mode of auscultation—Results of auscultation in health—Physical signs derived from auscultation in disease—peritoneum, stomach, intestines, &c.—circulating system, &c.*

THE sound emitted on striking sharply any portion of the body varies with its physical condition, of which it thus comes to constitute a sign. Immediate percussion, though adapted sometimes to the exploration of the chest, cannot be employed over the laxer parietes of the abdomen, partly because the wall is not sufficiently tense to vibrate readily in this manner, and partly because the process itself would be productive of considerable pain. Mediate percussion can alone be used ; and the sound produced by striking upon the pleximeter will vary with the physical state of the organs and parts which lie beneath that spot on the parietes to which it is applied, and the readiness with which they admit of or damp the sonorous vibrations. But, in addition to the sound observed, the percussing fingers perceive variations of resistance or yielding which are calculated to impart valuable information.

Mode of percussion.—The most convenient pleximeter is the middle finger of the left hand smoothly applied by its palmar surface on the part to be percussed. It is convenient, because it is always ready for use, and because it is capable of accurate adaptation to any part of organs or tumours which palpation can discover at any depth in the abdomen. In some cases, percussion on the finger gives pain to the patient,

while none is complained of when a pleximeter is employed. Perhaps the best is the ordinary thin plate of ivory; but care should be taken not to apply it to the surface cold, since this is likely to occasion involuntary muscular contraction. The stroke is made, in most cases, with the tips of the three first fingers brought to a level, or with two, or only one. It should be made sharply and quickly from the wrist; and, when the sense of resistance is to be tested, the fingers should be allowed to dwell longer on the pleximeter than when the sound alone is to be ascertained. Percussion may be strong or gentle; in the latter case, the stroke may be made by filipping gently upon the back of a single finger, or upon the nail. By gentle percussion, a sound is elicited whose character will depend upon the condition of the wall, and of the parts immediately beneath it; whereas, when it is forcible, the deeper tissues will modify the result. By noting the variations of sound occasioned by varied strength of percussion, a rough idea may be formed of the thickness of solid organs where parts which lie beneath them are qualified to alter the note. The position of the patient may be the same as for palpation; and it is often necessary to vary it, in order to ascertain whether the sound can be altered by favouring gravitation towards or away from the part percussed. The muscles of the abdomen must be relaxed, especially when the deeper structures are to be reached. The position of the observer of course must be guided by convenience; awkwardness alone has to be avoided.

Results of Percussion in Health.

The sounds which percussion elicits may be thus enumerated. 1. The sound may be what is called *dull*, its type being that produced over the mass of the liver. 2. *Resonant*; the vibrations being prolonged over a period of time varying with the freedom with which they are permitted by the parts below: the sound is termed *tympanitic* when the vibrations are very free, prolonged, and drum-like. The note elicited varies as to its height or depth in the musical scale. There is a difference in the quality also of the percussion resonance:—*a*. It is termed *amphoric* when it has a large tubular character, such as may be imitated by filipping

the cheeks after inflating them; *b*, where a metallic tinkling is added, it becomes the "*bruit humorique*" of Piorry, because it was at first supposed that it required for its production the conjoined presence of gas and liquid. It frequently arises in the abdomen where liquid and gas are in contact, or where they are merely separated by a layer of membrane: but it may also occur altogether independently of liquid, as is exemplified in its production on striking the hands closed so as to include a hollow space, upon the knee, the air being allowed to escape through a narrow chink between the fingers. The dull sounds are produced where the vibrations of the wall are interfered with by the contact of solid or liquid matter; and the resonant, where neither of these are present, and the vibrations can occur with freedom.

Percussion applied to the liver.—Percussion over the seat of the liver produces, on account of its solidity, a dull sound, continuous and uninterrupted, over a space corresponding with the extent of its contact with the wall of the abdomen. Gentle percussion will elicit it over the whole surface of contact; and, by filipping gently upon the nail, its boundaries may be very accurately determined. The line of its upper boundary has been already described as passing horizontally backwards from the lower extremity of the sternum: it is even and unbroken. The dulness of the left lobe extends about an inch and a half or two inches to the left of the median line: in females who have been much compressed by stays, it extends much further in this direction. Its downward extent varies considerably; over the right lobe it measures mostly about four inches, in some cases reaching the margin of the ribs in the vertical line of the nipple; at others, not extending so low. In the middle line its extent downwards varies from an inch and a half to three inches. Examined behind, the dulness on gentle percussion rises to about the eleventh intercostal space. The lower edge of the hepatic dulness is bounded by the resonance of the colon; the upper edge, by that of the lung; and the dulness of the left lobe, by the resonance of the stomach. In children, the extent of the *superficial* dulness, from the proportionately larger size of the organ, is greater than

in adults. To determine the level to which the summit of its convexity rises, the percussion stroke must be strong. The pulmonary resonance noticed by gentle percussion above the superficial dulness of the liver will then be observed to be deadened; this effect lessening, and the pulmonary resonance becoming purer, till it is perfected at about the level of the fourth intercostal space in front. Posteriorly, the *deep* dulness of the organ rises as high as the 8th or 9th rib. The deep dulness in children does not extend to so high a level as in adults. On using moderately strong percussion from the centre of hepatic dulness towards its lower edge, it is found to shade off gradually into the resonance of the colon; this qualifying the hepatic sound till the clear sound of the hollow intestine is attained. An idea of the thickness of the liver, a little way above the lower margin, may be obtained by the force requisite to elicit a mixture of resonance. Strong percussion also elicits the resonance of the stomach over the left lobe wherever this organ lies beneath it. When the stomach is full, not only is the percussion-sound altered, but the dulness of the left edge of the liver extends to a less distance to the left than when it is empty. Inspiration lowers, in proportion to its fulness, the upward level of the hepatic dulness, both on deep and superficial percussion: the lower edge of the superficial dulness also descends a little. Accompanying the dulness, there is a sense of resistance perceived by the finger, most marked over the region of complete dulness, on deep percussion, and shading off towards the lower margin of the organ.

Percussion applied to the spleen.—The spleen is another solid organ which imparts a dull sound on percussion in its region, but not so dull a sound as the liver. This cannot, however, be easily circumscribed, unless the stomach be empty; since, from the position of the spleen in relation to it, the distension of that organ with food or gas very readily modifies the result of percussion, and may even altogether destroy its dulness. The upper boundary of the splenic dulness, when determined under favourable circumstances, reaches the level of the tenth rib posteriorly, but deep percussion must be used in order to reach it through the interven-

ing portion of the left lung. All that lies below the margin of the left lung imparts dulness on superficial percussion, which becomes continuous below with that of the kidney; a little resonance and diminished sense of resistance sometimes intervening. The vertical extent is about $3\frac{1}{2}$ inches. The lateral extent of the dulness is anteriorly bounded by the resonance of the stomach. It commonly measures about three inches; but both this and the vertical measurement vary exceedingly, from the varying size of the organ.

Percussion applied to the kidneys.—The dulness imparted to the wall of the abdomen by these organs is to be sought posteriorly. Their upward extent of dulness cannot be accurately determined, in consequence of its being confounded with that of the liver and spleen, which lie here in front of them. The lower extremity, however, is more favourably situated; the dulness of the solid organ contrasting with the resonance of the intestine which is found between it and the crista ilii. The dulness of the right kidney descends a little lower than that of the left. Laterally, its outer boundary is again determinable by contrast with the intestinal resonance. The dulness both of these organs and of the spleen takes a somewhat lower position after a deep inspiration. Both also impart a sense of resistance to the percussing fingers, which lessens, and at last is replaced by elasticity as their boundaries are approached.

Percussion applied to the stomach.—The varying condition of this organ, which is sometimes empty, at other times more or less filled with gas and different proportions of solid and liquid food, must necessarily occasion variations in the extent and quality of its sounds, as elicited by percussion. When it is moderately filled with gas, the sound is hollow and ringing, or tympanitic, but not strongly so, and is accompanied by a sense of elasticity: it mostly extends upwards to the level of the xiphoid cartilage; and, on superficial percussion to the border of the left lobe of the liver, its extent downwards and to the left varies with its degree of distension. On strong percussion, it is perceptible through the dulness of the left lobe of the liver as far as the median line, and the pulmonary resonance has a stomachal quality for an inch or two

above the superficial resonance of the stomach itself, especially when the organ is unusually inflated. When it contains but little gas and no food, the resonance on deep percussion over the left lobe of the liver is less marked. Food and drink extend the boundaries of the sounds, and give rise to dulness where they gravitate. This is the only accurate and indisputable method of determining its lowest margin.

Percussion applied to the colon.—This, as the percussion of the stomach, varies in its results with the condition of the canal. When containing gas, there is resonance proportional to the distension of the intestine, throughout its course: it is better marked and more like that of the stomach in the right iliac region over the cæcum than in the left, where fæces often accumulate, and produce a dull sound. This, however, disappears after defecation, but even then the resonance does not equal that over the corresponding part on the right side. On superficial percussion, the resonance rises as high as the lower margin of the liver, at which level it crosses the abdomen. On the left side its upward extent will depend much upon the size of the spleen, and the state of fulness of the stomach. A large injection thrown up with force will occasion dulness where it fills the canal; and the metallic tinkling ("bruit humorique"), where it comes into contact with gas. Percussion made over the sacrum gives a resonant or dull sound, according as the rectum is filled with gas or fæcal matters.

Percussion of the small intestines.—The resonance of the small intestines also varies in depth with the amount of their distension, but is mostly less deep-toned than of the colon. It extends from the colon above to the pubes below, and across the abdomen from the ascending to the descending colon. They are the most moveable of all the abdominal organs, and thus are capable of having the extent of their resonance affected by a variety of causes which alter their position and extent of contact with the abdominal parietes: they may even lie so completely in front of the colon and part of the liver as to obscure the physical indications of their presence. Over all the parts of the intestines there is a sense of elasticity imparted to the percussing fingers.

Physical Signs of Disease derived from Percussion.

1. *Liver.*—*a. Dulness altered in position* without alteration in extent. It may be raised to a higher level towards the chest by causes distending the abdomen below it, its upward extent attaining the level of the third or fourth rib in front. It may, on the other hand, be depressed by disease enlarging the contents of the thorax on the right side; such as pleurisy or emphysema. Either of these changes of position may occur as the result of tight-lacing in females. The depression of the liver can be detected by palpation, but the elevation of it above the natural position into the chest, by percussion alone. *b. It may be increased in extent.* This may occur in any or in all directions; it may be only downward or upwards, or, when there is enlargement of the left lobe, it may occur principally or solely in its lateral width. In some of these cases the *outline of its upper or lower boundary is less even* than in health. *c. It may be diminished in extent.* Where the lower margin of the liver is rounded, a fallacy may arise from a portion of intestine slipping up between it and the abdominal wall. This may be obviated by pressure of the pleximeter below the apparent lower limit of the dulness, so as to displace the intestine and allow of the hepatic dulness below it being arrived at. The same thing may occur, but more rarely, when the liver is perfectly healthy. *d. The limits of the dulness may be unaltered* by respiration or varied states of the stomach and bowels. *e. The difference of the results of deep and superficial percussion* towards the margins of the liver *may be less than in the normal state*, the conjoined resonance of the stomach or colon not being capable of being elicited at all over their accustomed situations, or only on using a more forcible stroke than is requisite in health. Accompanying this sign there is increased resistance to the percussion over the same parts. *f. There may be resonance* in place of dulness over the hepatic region. This may not be a sign of disease of the liver, but of gas between it and the abdominal wall: when it occurs as a sign of liver disease it is mostly limited in extent, not occupying the whole of the hepatic region. It may present the amphoric character, and even the metallic tinkling

echo. It is possible, however, that the entire of the liver dulness may be displaced by resonance from changes in the physical state of the liver itself, a case having been recorded in which the entire organ contained air.

2. *Spleen*.—The determination of the limits of the dulness of the spleen in the normal state is so difficult, that it may well be believed that it is still more so in disease. The following signs, however, are noticeable in respect to it as well as to the liver:—*a*. The dulness may be *altered in position*, the organ being thrown by pressure completely out of its natural situation. When the pressure is exerted from above,—as in pleurisy or pneumothorax,—the dulness is observed lower than usual; and when from below, it is observed at a higher level on the side of the thorax. The position and extent of its dulness is greatly modified in tight-laced females, the dulness occupying a more anterior position. *b*. It may be *increased in extent*. This is very readily determined: the increase is mostly manifested downwards and to the right. It occurs sometimes to a very remarkable extent, and sometimes undergoes changes within brief periods of time. *c*. It may be *diminished in extent*. This sign is the most difficult to ascertain. The stomach and bowels should be empty when the examination is made, and the patient should be examined in several positions and at various periods of the day before it should be pronounced upon with certainty. It may arise not only from a diminished size of the organ, but also from gaseous distension of the stomach and bowels, or from one extremity of the organ only coming in contact with the wall in consequence of displacement from the presence of stays.

3. *Kidneys*.—*a*. The dulness may be *altered in position* from alteration in the position of the organ, either by pressure arising in disease of other organs or in the abuse of stays. When the organ is pushed downwards there is no resonant interval between its dulness and the crista ili. Clinically, I do not know how this is to be distinguished from dulness arising from increased size of the organ, especially where the spleen and liver are hypertrophied and their dulness extends unusually downwards. When the kidney is displaced forwards or upwards, palpation discovers it better than percussion. In the case of a fe-

male, I once found the left kidney forming a palpable tumour on that side beneath the margin of the cartilage of the last ribs, and the dulness it gave on percussion extending about two inches above them. *b*. *Increased extent* of dulness is noticed in the directions downwards and outwards; it may occur upwards also, reaching to a considerable height on the wall of the thorax, sometimes as high as the sixth rib. In cases where the spleen or liver are greatly enlarged, there is an actual impossibility of determining anything by percussion in the lumbar region beyond the presence of these solid organs, from whose dulness that of the kidney is not distinguishable. *c*. *Diminished extent of dulness* must be to a very considerable degree before it can be clinically appreciated.

4. *Stomach*.—The resonant note of the stomach may be variously affected in its position, extent, and quality. *a*. Its *position may be altered*. In determining this point,—as all others in connection with this organ,—it is important to be satisfied that the resonance whose characters are being examined is really that of the stomach, because a distended or displaced colon will often simulate its note. This can often only be effected by causing the patient to drink a quantity of water, or by making the examination when the stomach contains a recent meal, as well as when it is empty. Where a dulness is suspected to be gravitative dulness of matter in the stomach, and the position of it on the wall of the abdomen, renders it capable of being mistaken for dulness from other causes, the patient should be made to vomit, or the occasion of spontaneous vomiting should be seized to aid in the determination of the point. It would in this case be succeeded by a resonance. The position of the resonance may be altered by causes acting on it from above or from below, or by changes in position and enlargements of other organs of the abdomen. It may thus be placed higher up in the thorax than in the normal state; or it may be found lower altogether towards the abdomen, its resonance not rising so high as the natural level, or not being discoverable at all over the lower ribs; or it may be pushed so far to the right as that, even in the distended state, its resonance will not reach within a considerable distance

its natural left limit. In some cases the resonance of the stomach assumes a more or less vertical direction, being traceable from the upper extremity downwards towards the umbilicus, its transverse diameter being proportionally lessened. This is a sign of that form of displacement of the organ which often occurs in enlargement of the liver, or depression of the whole organ and elongation of it downwards by the pressure of stays. *b. Increased extent* of stomach resonance may be so great as even to arrive at the lowest part of the soft wall of the abdomen, and the dulness arising from contained matters may be observed here also. On the other hand, it may rise to a considerable height into the chest. In these last cases there is the greatest difficulty in ascertaining accurately its upward extent, in consequence of the pulmonary sound, even on very gentle percussion, being tinged to a considerable distance with the tympanitic resonance of the stomach. It often becomes impossible also in this case to discover any splenic dulness, or even that of the left lobe of the liver. *c. Diminished extent.* This is normal when the stomach contains little gas or food, and to be pathological it should be noticed under all conditions, and should have a character of greater or less permanence. *d. The character of the resonance* may be altered, and it may become unnaturally tympanitic, as is commonly the case when its extent is increased. The conjoined presence of liquid and gaseous matter also will develop the "humoric sound." The permanence of this sound, as also that of the gravitative dulness, should in certain cases be observed. *e. Dulness* is sometimes observed to replace resonance in situations where gravitation has no influence, and to be noticeable in all conditions of the organ: it is commonly found towards the pyloric extremity. Here, however, a thickened and enlarged left lobe of the liver may occasion a source of fallacy; but this may be overcome by observing that deep percussion elicits the stomach resonance, which would not be the case were the dulness due to altered physical condition of the organ itself. The position and characters of the dulness with deep or superficial percussion in different states of the stomach must often be ascertained.

5. *Colon.*—*a.* The resonance may be

altered in position. This most frequently arises in that part of the colon which is naturally the most moveable, the transverse part of the arch; the least frequently displaced parts being the cæcum, and the ascending and descending portions. The resonance of the transverse portion of the arch and of the flexures on either side may be raised by pressure from below considerably higher than natural, and a portion of it may obscure the dulness of the lower margin of the liver, or that of the spleen. In other cases the resonance of the same part may be noticed as low as the pubes. In any case where doubt arises as to the resonance being due to the colon, or to some other part of the digestive canal, a full injection of warm water will, by replacing it with dulness, determine the difficulty. It sometimes happens that the transverse colon forms an arch, with its convexity downwards and in contact with the wall of the abdomen above the pubes, the thinned mesocolon stretching over the small intestines between it and the liver. In this case, resonance above the pubes is not easily distinguishable from that of the small intestines without the use of an injection. *b. Increased extent* of the resonance from expansion and elongation of the canal may be observed sometimes to an extent scarcely credible, the whole of the abdomen, or nearly all, presenting the same deep toned resonance. *c. Diminished extent:* for this sign to be pathological it must possess more or less of the character of permanence. It may be observed throughout the whole course of the colon, or only in a certain part of it; in the latter case, another portion may present an extended resonance. *d. Altered character* of the percussion resonance may be conjoined with the two last signs, as well as occurring independently of them. The sound may become more tympanitic than in health, or less deep-toned, or the "humoric sound" may be elicited. This is not in the intestine always the result of the conjoined presence of liquid and gas. *e. Limitation of the dulness from injection* has been used as an indication of a physical obstruction to its passage along the canal, at that spot at which it ceases to traverse it. *f. Dulness* may replace resonance in any part of the course of it, either entirely or partially: in estimating its value as a sign of disease in the colon, beside the adop-

tion of other means of examination, its permanence or disappearance with alterations of position, and with defæcation, require to be observed.

6. *Small intestines.*—*a.* Their resonance may, like that of the stomach and colon, be *altered in position*: should doubt arise respecting its really belonging to this part of the canal, it may be set at rest by the discovery that it is unaltered by the imbibition of liquids into the stomach, or by injection into the rectum. The greater part of the small intestines is exceedingly moveable, and they may become disposed of in any part of the abdomen, when tumours of various kinds make demand upon its space: wherever they are placed, the corresponding part of the wall will present their resonance on percussion. *b. Increased extent* of resonance.—This may vary from very trifling increase of the surface over which the intestinal resonance is audible, to one which encroaches upon the position of those organs of the abdomen which have been enumerated above. *c. Diminished extent* of resonance occurs mostly with encroachments made upon the space they occupy by surrounding organs. *d. Altered character* of sound: it may become deeper-toned and tympanitic on the one hand, or a higher pitch than natural on the other; or it may, under certain circumstances, both when liquid is conjoined and when it is not, present the “humoric” character. These varied characters in the sound are not observed universally over the surface of intestinal resonance, even the tympanitic sound being unequally distributed over it. *e. Dulness.*—This is rarely observed to any extent, unless other parts than the intestinal tube are affected. Still the resonance may in certain parts be more or less replaced by dulness over a limited space from disease of the tube itself. Limited dulness may arise also over the surface corresponding with this intestine, from disease of parts with which it is in close anatomical relation.

7. In addition to the physical signs above described, which may be referred with some accuracy to physical changes in the organs enumerated, *resonance and dulness, limited or extensively diffused, occur, which cannot be referred to them.* One reason of this is, that the space between the two layers of the peritoneum, commonly termed the “peritoneal cavity,” may become the seat of accumu-

lations of a gaseous or liquid character, either loosely effused or circumscribed by adhesions or by cysts. Wherever they accumulate, they push aside the organs which are naturally in contact with the wall, and present their own percussion sound in place of that which they have displaced. Another is, that certain parts which in a state of health do not come into contact with the wall, and thus give no physical sign by percussion of their existence, do both when diseased. I may instance in this respect the pancreas, the several folds of the peritoneum and the lymphatic glands, or other vessels of the abdomen. A third reason is, that certain organs which in health occupy the pelvis, as the bladder, uterus, and ovaries, rise out of it in disease, and displacing upwards and laterally the true abdominal organs, occupy the space of their natural resonance with their own variety of sound. Whatever the modification of percussion sound may be, it should be carefully determined, its limits and outline accurately drawn, its alterations with changed position of the patient ascertained, and its variation with the lapse of time, and with varied conditions of the abdominal organs, closely and patiently observed. Where this is done, and a proper method adopted in exploration, it is remarkable with what precision the physical condition of internal organs and parts may be determined.

8. Percussion affords signs of abdominal disease, by disclosing certain *physical conditions of the thoracic organs* which may result from its presence. As respects the *pulmonary resonance*, allusion has already been made to the infringement upon its lower limit by the enlargement of organs in the abdomen, or by effusions and accumulations within its cavity: but in addition to this it may be rendered dull by accidental communication between the pleura or the lung and morbid cavities in the abdominal organs, and the effusion of their contents into either. The *heart's dulness* may in like manner be displaced. This is, however, chiefly in the direction upwards, not laterally as in pleurisy of the right side. It may be increased also by rupture of morbid cavities, and effusion of their contents into the pericardium. It is probable that it may sometimes be lessened in extent by being pushed beneath the margin of the left lung.

9. Along with changes in dulness and resonance, percussion indicates in all the instances mentioned corresponding *changes in resistance and elasticity*. Another sensation perceived in the act of percussion is that which occurs in certain cases when hydatids have accumulated in any part sufficiently near the surface of the abdomen. It is called the "*hydatid fremitus*," and has been compared to the sensation perceived by the finger on striking a mass of jelly, or on percussing on the glass of a repeater watch placed upon its back on the left left hand. In order to its development, however, the cysts must be in a definite condition; they must be in contact with just enough liquid between them to fill up the intervals, an excess or deficiency of this impairing the perfection of the fremitus, or at last altogether destroying it. This very much diminishes the clinical value of the sign.

AUSCULTATION.

The method of physical exploration which has been last considered was that which arises out of the phenomena of sound, as elicited by striking the surface of the abdomen, and as heard through the intermediate layers of air. The same sense informs us of varieties in the sound produced by the same means when the ear is applied either immediately or with the assistance of an appropriate conducting medium to the wall of the abdomen. The ear thus applied becomes cognizant also of other sounds, which other modes of manipulation, by imparting motion, may give rise to, or which originate spontaneously from the respiratory acts, or from the motions naturally occurring in the digestive tube, or in the circulating system of vessels. The appreciation of the sounds under all these circumstances is understood as that by "*auscultation*." Its application to diseased conditions of the abdomen at present is, indeed, but limited, compared with that which obtains in respect to thoracic maladies; but there is reason to believe that its more extended employment will lead to greater reliance in its diagnostic value.

Mode of Auscultation.

The position of the patient must vary with the part which is the object of exploration. When it is the anterior regions he may be recumbent, and when one side

is to be examined he may turn over, so as to lie on the opposite. When the back is to be examined he may either stand, or sit up in bed, or upon a chair. The observer must suit his position to his convenience. The part to be examined should either be bare, or covered with some light article of clothing which emits no sound on pressure. The ear may be applied to the surface with only this intervention, but more commonly the stethoscope is preferred. For most purposes the ordinary stethoscope may be employed, care being taken that its lip is well flattened outwards, so as to avoid the pressure of an edge upon parts which may be too tender to bear it: for some purposes, however, as for the appreciation of the sound which percussion elicits, the solid stethoscope is the most applicable, since it conducts well all sounds arising in solids, and avoids the ringing shock which the ear receives from the column of air contained in the ordinary instrument. Referring the reader who desires information on the subject to the original essays on Auscultatory Percussion,* I shall pass on to the consideration of the ordinary method of auscultation.

Results of Auscultation in Health.

The movements which occur within the abdomen in health, and which alone can be by possibility the sources of sound, are—1. Those of the opposed surfaces of the peritoneum upon one another during the movements of respiration, and the spontaneous or imparted movements of organs on one another. 2. The movements of the alimentary and secreted matter,—as gas within the canal either by the spontaneous action of the latter, or by impulsion from without. 3. The movement of the blood in the vessels. As to the first of these, as every provision is made for the easy sliding upon one another of all the organs contained within the abdomen by covering them with a smooth and slippery membrane, so, as the result of the same contrivance, are these movements effected without sound. The passage of matters, however, into and through the digestive canal is not so completely deprived of friction, and thus, also, not performed without sound. On applying the stethoscope over the

* New York Journal of Medicine, 1840; and L'Union Médicale, 1850.

stomach, food and drink may be heard to enter it as low as its most depending part. When the stomach contains liquid and gaseous matters a variety of gurgling sounds are heard from their commixture, which sometimes assume the amphoric or metallic quality. When there is much liquid in the stomach, succussion may give rise to a sound of fluctuation, which may not only be heard through the stethoscope, but is audible at a little distance from the part. In health this phenomena is of only temporary duration, terminating with absorption of the liquid, or its passage through the pylorus. The sounds emitted from the *intestines* are termed *borborygmi*, and arise from the passage of the gas they contain through insufficient spaces from one part of the tube another. They mostly occur during the intestinal part of the digestive process, and when absent may often be induced by taking a draught of cold water into the stomach. They occur abundantly during the contractions which ensue on the operation of a purgative. The flow of blood through the *veins* and *arterial branches* within the abdomen is accompanied by no sound in health. The *aorta*, however, imparts to the ear at each pulsation a single dull sound. This is scarcely audible, except in spare subjects, and then diminishes in intensity as the aorta is followed downwards, disappearing opposite its division into the iliac arteries. It is rarely that a second sound is heard.

Physical Signs derived from Auscultation in Disease.

These will consist in modifications of clearness, extent, and character of the several sounds which naturally are audible in the abdomen, and in addition to these in the appearance of new sounds. Beside these, auscultation applied to the chest indicates the effect which abdominal disease has upon the physical state and efficiency of the thoracic organs.

1. *In the peritoneum*.—When the surface of the membrane is roughened, the friction obviated by its healthy condition takes place, and under favourable circumstances not only affords a palpable sign of disease, but sound arises also in connection with it. The circumstances under which it may occur are the same as those described with the palpable sign. All roughenings of the surface do

not appear to be accompanied by it, a certain amount of pressure and resistance being necessary for its production. Friction sounds may be audible also in cases where friction vibration cannot be felt. Their character presents every variation, from “gentle rustling” to loud “leather creaking” and roughness. As with the palpable sign it should be sought for frequently, and in various positions of the trunk.

2. *In the stomach*.—The sounds described as occurring in the stomach may be altered in their *quality* as well as in *locality* and *extent*. In quality they may assume a more or less amphoric character, sometimes with a distinct metallic tinkling echo. In these cases the heart's sounds are heard over the stomach with the same accompaniment. As to their extent they may sometimes be heard in localities very distant from the natural seat of the organ, and in some cases to the lowest part of the abdomen. When the *fluctuation sound on succussion* persists, it indicates either that the liquid is not absorbed, or does not pass readily through the pyloric orifice from the stomach.

3. *In the intestines*.—The gaseous sounds, *borborygmi*, may be increased or lessened in frequency or loudness; they may also be especially evidenced in some part of the abdomen, or they may be inaudible altogether. Their diminution indicates a lessened activity in the intestinal contractions, while their loudness and frequency point to augmented irritability of the portion of the canal in which they occur. When altogether absent it may be due to the intervention of a non-conducting medium between the intestine and the ear. *Gurgling* is sometimes heard in disease where fluid and gas co-exist in the intestine. The occurrence of it over the cæcum, when pressure is made in this situation in typhoid fever, is familiar to all. A *fluctuation sound* may be audible sometimes spontaneously, and whenever it occurs it points to an accumulation of liquid, which is put in motion by a powerful action of the intestinal wall. In some cases a sound of *grating* has been heard over the course of the intestines, which has arisen from the accumulation within it of solid hard substances. It has been said that in cases of *tænia* a sound has been heard which has been compared to a sound of very fine undulations, to the distant rolling

of a wheel, or to that of a small body moving in a liquid. It is too delicate in its character to be confounded with *borborygmi*, or any other sound than the muscular.

4. *In the liver.*—There is no sound audible over the mass of the liver in health, but in some forms of disease of that organ auscultatory phenomena are observed. These are connected with the presence of a cavity containing air and more or less fluid in its substance or near its surface. In this case, *cavernous respiration, gurgling cavernous cough, and voice sound*, may be heard, or these may be accompanied under favourable conditions with *metallic tinkling*. These signs occur in connection with a communication with the lung, but gurgling and metallic tinkling with cough or on pressure may occur when the air has access from other sources.

5. *In the gall bladder.*—*Crepitation or grating* may occasionally be heard from solid hard bodies accumulated within it: this sound may be elicited by pressure.

6. *In the kidneys.*—The accumulation of similar hard bodies in the pelvis of these organs, if their position is such as to be readily arrived at, may perhaps give to the ear the *sound of crepitation or friction* on pressure.

In addition to the above signs of disease in the abdominal organs, there is the *hydatid sound*, which corresponds in its characters with the sensation afforded to the fingers on percussion. Like the palpable sign, the conditions of its appearance are such that its clinical value is much diminished: it may be found in any situation in the abdomen where hydatids accumulate.

The following are the physical signs connected with the circulating system:—

1. *Increased intensity of the impulsive sound of the aorta* synchronous with the systole of the heart.

2. *Arterial murmur* may be sought either by application of the stethoscope over the course of the aorta in front, or in the back by the side of the spine. Where tumour is felt it may exist over it. It is mostly single, accompanying the systole of the heart, or it may be synchronous with its diastole, or both. In character and intensity it may vary between simple soft blowing and every grade of roughness and grating. Whenever it occurs it indicates an obstruction of some kind to the free flow of

the blood: this may be disease of the coats of the vessel, or it may be the partial compression of it by a tumid organ in its neighbourhood. In all cases the murmur will be more easily produced the more spanæmic the condition of the patient. In such patients moderate pressure of the stethoscope will produce and exemplify it. A murmur may be audible when the patient is recumbent, but inaudible when erect. An arterial murmur, or one allied to it in many of its characters, occurs as a sign of pregnancy, and as such will be alluded to hereafter. Under certain circumstances, where a communication has occurred between the aorta and vena cava, a loud roaring continuous murmur occurs, which may be perceptible not only at a distance from the patient, but also by the patient himself.

3. *Venous murmur* may be heard in the abdomen in certain cases where the blood is spanæmic, or when in addition some pressure is exerted on the vein. In the former case it is heard in other situations also, as in the jugulars; in the latter it is localized. It is always continuous, varying however in its special similitude, but soft in its tendency, and often humming as it occurs in the abdomen. When the vein in which it occurs is near the diaphragm it is increased in intensity at each beat of the heart, and with each inspiration.

Abdominal disease often modifies the sounds of the chest just as disease of the chest produces signs referable to the organs of the abdomen. I shall confine myself to the enumeration of those signs which may thus be produced independently of disease, either primary or consecutive, of the lungs or heart themselves.

1. *Defective respiratory murmur.*—The lower limits of natural breath sound may be raised considerably in cases where abdominal enlargements raise the diaphragm, and compress the lung toward the upper region of the thorax. In cases where disease interferes also with the expansion of the thoracic cavity, on one or both sides, the respiratory murmur may be proportionally weakened. The same thing, and even *suppression* of murmur over a certain space may occur from the effusion into the pleura or lung of morbid products from the abdomen.

2. *Exaggerated respiratory murmur.*—This may occur on one side as com-

pensatory for defective respiration upon the other, or may in certain cases which interfere with the diaphragmatic respiration appear over the upper regions of the chest. In some of these cases *harshness* may be conjoined.

3. *Tubular breath sound* may occur from compression of the lung by such abdominal disease as elevates the diaphragm: it may be on one or both sides, and is generally most distinguishable on examination of the back in the neighbourhood of the larger tubes.

4. The rhonchi which arise in connection with abdominal disease are the following:—1. A variety of crepitation described by Dr. Walshe as the "*hepatic compression rhonchus*," which he believes to arise from the expansion or uncreasing of a compressed and creased portion of the lung. It only occurs in forced inspiration, not commencing till the respiratory murmur is almost at an end; it is very slowly evolved, and consists of a great number of excessively fine, dry, rather superficial crepiti, which are audible at or near the upper edge of the liver. 2. Mucous rhonchus may occur in connection with the effusions of liquid products of disease into the air tubes from the abdomen. 3. The existence of *cavernous rhonchus* would indicate consecutive destructive disease of the tissue of the lung itself.

5. The *seat* of the heart's sounds may be altered by being raised above the natural level in some cases of abdominal enlargement. They are occasionally heard more to the right than usual.

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ON THE

INHALATION OF CHLOROFORM, ITS ANÆSTHETIC EFFECTS, AND PRACTICAL USES.

By ROBERT DUNN, M.R.C.S., &c.

(Read before the Royal Medical and Chirurgical Society of London, April 22, 1851.)

THERE can be no doubt that the anæsthetic effects of the inhalation of the vapour of chloroform are due to its entering the circulation, and to its being carried by the blood to the vesicular matter of the sensory ganglia, and to the cells, or cell nuclei, at the peripheral extremities of the afferent nerves. And while it is reasonable to infer that, in thus circulating with the blood through the encephalon, its presence, like that of any similar morbid agent, must more or less affect all the sensory feelings and psychical manifestations, it is nevertheless abundantly manifest that a kind of elective affinity exists, by virtue of which the vesicular matter of one centre of action becomes affected before that of another; for, during the slow and gradual inhalation of the vapour, the function of sensation is suspended before that of intellectual action,—the *consciousness of feeling* is obliterated, and consequently immunity from pain secured, before *intellectual consciousness* is totally abolished. M. Flourens was, I believe, the first to point out the tendency of certain morbid agents to act primarily and specially on one nervous centre in preference to that of another, by virtue of some special elective affinity between such agents and certain ganglia of the encephalon. Before entering, however, upon the consideration of the physiological effects of the inhalation of chloroform, it appears to me expedient to premise some observations on the *functions of the nervous centres* themselves, with a view to the better appreciation of its application to practical purposes.

The nervous system of man, in accordance with its office and the nature of its functions, is generally considered to admit of a three-fold division:—into the physical, or excito-motory and reflex,—the nutritive and secretory,—ganglionic,—and the sentient, psychical, and voluntary, or cerebro-spinal system.

It is admitted that there is no point in physiology more clearly made out than that the great hemispherical ganglia are *exclusively* the seat of *perception*, and its associate memory,—the centre of intellectual action, and of all the operations of thought,—“the sole receptacle,” in the language of Cuvier, “where sensations become *perceived* and *consummated*,” formed into ideas by their ganglionic action, and where the will exerts its power. But comparative anatomy, pathological research, and experimental inquiry, alike establish the position that the cerebrum is neither the seat of *sensation* nor of *motion*. They indisputably demonstrate that the former is seated in the *sensorium commune*, or collection of sensory ganglia, and the latter or motor power in the corpora striata and anterior segmental ganglia of the spinal cord. Sensation or feeling is an act of *simple consciousness*, and sensibility, or the faculty of receiving pleasure and pain, a function of the sensory ganglia. Throughout the whole of the invertebrate sub-kingdom, with the exception of the highest mollusca,—the Cuttle-fish,—the *cerebrum does not exist*; and the conclusion in consequence is inevitable, unless we deny the *consciousness of feeling* to myriads of animals, that sensation or feeling, and consequently pain or pleasure, is an attribute of the *sensorium*, and not of the *cerebrum*. To my mind, Dr. Carpenter has fully established the important position,—“the independent character of the sensory ganglia as instruments of sensation, and of respondent consensual actions and movements:” but *sensation* and *perception* ought not to be confounded. The functions are perfectly distinct, and have their seat in different nervous centres. The former is *sensorial*, and *effected through the direct agency of the sensory ganglia*: the latter is *purely mental*, and *exclusively cerebral*. The mechanism (so to speak) of their action is different. In *sensation* it is distinct and single; each sensory ganglion, as the seat of its own special sensation, responds directly to the stimulus received or impression made on its ganglionic centre. Thus, in the case of the special senses, each nervous centre is the seat of sensations, *sui generis*, of its own endowment, and which it exercises independently of the cerebrum, for in myriads of animals *no cerebrum exists*; and even in the lower

vertebrata, the olfactory, optic, and auditory ganglia have no direct connection with it. But, in *perception*, a double ganglionic action is involved. The various sensations or impressions on the sensory ganglia, as the first step in the process, are transmitted, through commissural connections, to the hemispherical ganglia, and *there*, as the second step, become *perceived* and *consummated*, converted by the ganglionic action of the cerebrum into ideas, which furnish incentives to intellectual action and materials for thought.

Metaphysically viewed, Sir Wm. Hamilton justly, in my opinion, considers *sensation* as identical with *simple consciousness*—a *subjective condition*; and *perception*, as the *consciousness* of the *object* which induced that condition—a recognition of the cause of the sensation as something *external* to the mind itself.

And thus we are necessarily led to the conclusion that, while the cerebrum is the seat of perception and the centre of intellectual action, physical pain or suffering, as a sensational state and subjective condition, has its seat in the sensory ganglia.

Now comparative anatomy and human embryology clearly prove the corpora striata, thalami optici, and corpora quadrigemina, to be distinct cephalic ganglia, each exercising a different function. They, with the nervous centres of the special senses, and the cranio-spinal axis and nerves, constitute the nervous apparatus of automatic life. The *corpora striata* are in direct and continuous commissural connection with the anterior segmental ganglia of the cord, and that they form with them the *motor centres* of the nervous systems, pathological investigation and experimental inquiry have fully established. The *thalami optici* are in like continuous commissural connection with the *posterior* segmental ganglia of the cord, and the evidence is equally conclusive that they are, with these ganglia, the *great centres* of *tactile* and *common sensation*. It has been shown, by Dr. Todd and Mr. Bowman, that the same intimate relation subsists between the anterior and posterior ganglia of the cord as exists between the corpora striata and the thalami optici.

The corpora quadrigemina are manifestly not simply the ganglionic centres of vision: some physiologists, indeed,

have restricted that function to the corpora geniculata. They are evidently the seat of simple emotional impulses, readily excited into action by sight, and quite independently of the cerebrum. In proof of this, it is only necessary to advert to the period of infancy, before the dawning of intelligence. The infant's laughing eye, and its expression of joyous emotion, are familiar to all of us; and not the less so are the effects produced by making strange faces at young children. The fright, scream of alarm, and even fit of convulsion, which have at times been known to follow, are apt illustrations, and admit of no other explanation. Indeed, it is not to be denied that emotional impulses are excited through all the special senses by impressions *from without*; and in consequence the inference is irresistible, that the sensory ganglia are the *seat* of the emotional feelings, or, in other words, of the feelings of pleasure and pain associated with the emotional states. Dr. Carpenter has ably shown that the true emotions, like the moral feelings and the animal propensities, are of a *composite nature*, involving, with the *sensorial* feelings of pleasure and pain, an *intellectual element*, in all of which the feelings are of *sensorial*, and the ideas of *cerebral origin*.

Now, bearing in mind the distinction which exists between *sensation* and *perception*,—that, in the one case, sensation or feeling is an act of *simple consciousness*, and has its seat in the sensorium commune, or sensory ganglia; and that, in the other, perception is a mental act, and one of *intellectual consciousness*, having its seat in the hemispherical ganglia,—we have next to inquire what are the *feelings* experienced and the phenomena observed during the slow and gradual inhalation of the vapour of chloroform. And on this subject I cannot adduce a greater authority than the testimony of my friend Dr. Snow. No medical practitioner in London has administered the agent so extensively, and under a greater variety of circumstances, nor witnessed and studied its effects more assiduously and carefully, than Dr. Snow has done. He has kindly furnished me with the results of his experience, which I shall give in his own words:—

“The first degree of the influence of chloroform includes all the effects of that agent which a person may experience whilst he still retains a correct

consciousness of where he is and what is occurring around him. There are usually numbness and tingling of the surface of the body, singing or other noise in the ears, and dizziness, with not unfrequently a sensation like that of rapid travelling. The feelings are generally described as having been agreeable in this stage.

“In the second degree the patient is no longer conscious of his situation, but the mental functions are not necessarily suspended. He usually appears as if asleep; but if the eyelids be raised, he will move his eyes in a voluntary manner, and there are occasionally voluntary movements of the limbs. Although generally silent if undisturbed, he may nevertheless laugh, talk, or sing; and it is chiefly, if not solely, in this degree that dreams take place. Violent motorial actions in this dreamy state are sometimes manifested; and when the dreams are remembered, as they occasionally are, such actions are found to have been associated with some quarrel or annoyance. In this degree the loss of sensation is sometimes so complete, especially in children, that the surgeon's knife may be used without pain: commonly, however, its use at this time occasions expressions indicative of pain, which are either not remembered, or recollected as having occurred in a dream.

“In the third degree the pupils of the eyes are generally somewhat contracted and inclined upwards; the small blood-vessels of the conjunctiva are usually enlarged. There is no longer motion of a voluntary character, but occasionally some rigidity of the muscles, especially in robust persons. Sometimes there is an unintelligible muttering, but never any distinct articulate speech.

“It is seldom necessary to carry the effects of chloroform beyond this degree, for during operations there are usually no signs of pain, and never as it would seem the consciousness of any; for although there are sometimes gestures indicative of feeling, there is never any recollection of pain.

“In the fourth degree the muscles are completely relaxed, the pupils are dilated, and the breathing, hitherto natural, is often stertorous. There is never pain from a surgical operation, nor any sign of it.

“In the fifth degree, as witnessed in

the lower animals, the ribs cease to move in breathing, and respiration is performed only by the diaphragm. Spontaneous recovery from this state will yet take place if the inhalation be discontinued, but if continued the breathing will cease, the heart continuing to beat, and its action becoming arrested only for want of the respiration, as in asphyxia. From this state the animal may sometimes be recovered by artificial respiration. This state may be called the sixth degree.

"If an animal is made to breathe air strongly charged with chloroform, so that at the moment when the breathing ceases there is a good deal of the vapour in the lungs, the vapour becoming absorbed in addition to that already circulating in the blood, the heart's action is arrested by the direct effect of the vapour; and this may be called narcotism to the seventh degree."

Dr. Snow justly observes, "that these degrees pass insensibly one into another, so that it is sometimes difficult to say in which of the two contiguous degrees the patient is at the time, and that when the inhalation is discontinued, the effect of the vapours subsides in the inverse order to that in which they had been induced,—for instance, if the narcotism had been carried to the fourth degree, it diminishes to the third, then to the second, afterwards to the first, and finally subsides altogether. On this account the term degree is more appropriate than stage, as the first degree reappears in the last stage of recovery from the influence of chloroform and other narcotics."

Now, from the records of personal experience, and from a careful consideration of the phenomena observed in others, we may trace the following order and sequence in the effects of the inhalation of the vapour of chloroform, properly diluted, upon different nervous centres.

Thus, the first few inhalations are attended with *feelings* which indicate disturbance in the action of the sensory ganglia, as "singing in the ears, a sense of numbness, and tingling of the surface of the body," &c., but which are soon succeeded by a *transient stage* of more general excitement; of delirium in the hemispherical ganglia, for instance,—as singing and incoherent talking, and of excited emotional impulses,

and consensual movements in the *sensory ganglia*,—as laughter and uncontrollable motorial actions; this is speedily followed by suspension of the function of sensation,* *the consciousness of feeling*, while as yet some degree of *intellectual activity* remains. Sensorial impressions *from without* are no longer transmitted from the sensory ganglia to the cerebrum; but this "suspension of ordinary sensational impressions, as in sleep, with persistent intellectual activity, is the *typical* characteristic of dreaming;" and dreams often occur. The commissural fibres, between the cerebrum and these ganglia, *Reil's nerves of the internal senses* being still in action, they transmit downwards the *residual intellectual activity* from the cerebrum to the sensory ganglia, and frequently give rise to manifestations, which impress the mind of common observers with the belief of pain and suffering being felt under the knife of the surgeon, while in reality there are none.

The function of the cerebrum as the centre of intellectual action is next suspended; a state of coma is induced, *a complete abolition of consciousness, reducing life to a series of automatic movements*. After this the medulla oblongata and true spinal centres become involved, reflex action is stopped, and breathing by the ribs suspended. The ganglionic system is the last to be implicated; but, with the arrest of the peristaltic action of the heart, life ceases.

Dr. Snow as the result of experience finds that about twelve minims of chloroform on the average are sufficient to produce the first degree of narcotism in the adult, twenty-four minims the second, and thirty-six the third, provided these quantities be inhaled within two or three minutes, and from a suitable

* The inhaled chloroform entering the circulation is conveyed to every part of the system, and not only produces anæsthesia of the sensory and cephalic ganglia, but also of the cells or cell nuclei, at the peripheral extremities of the afferent nerves. In the words of Dr. Sibson, "being applied everywhere to the peripheries of the nerves, it everywhere, so to speak, produces directly local anæsthesia of the nervous peripheries, and not only *loss of sensation*, but of the power of reflex excitability also." The local application of chloroform, like that of hydrocyanic acid, induces local anæsthesia, by paralyzing locally the peripheries of the nerves. Dr. Sibson, in his admirable address "*On the Causes which Excite Respiration*," published in the recent volume of the *Provincial Transactions*, has ably traced the direct centric effects of the inhalation of chloroform upon the spinal marrow.

inhaler, and not from a sponge or handkerchief.

Although less than one fluid drachm of chloroform has proved fatal from being improperly administered, Dr. Snow considers that an indefinite quantity, for instance an ounce or two, may with safety be inhaled, provided this be done slowly and gradually, and the chloroform be largely diluted with atmospheric air, suspending the process entirely, from time to time, at proper intervals. *The conditions necessary to ensure uniformity of effect and perfect safety to the patient* are, that the chloroform be pure, and the mode of inhalation be slow and regular, with a proper dilution with atmospheric air. When these conditions have been rigidly observed *no fatal case has ever occurred*; and it is truly a matter of surprise, considering the extent to which chloroform has now been employed, and the indiscriminate and injudicious modes at times in which it has been administered, how few are the fatal cases on record.

These solitary, though lamentable instances, admit of a satisfactory explanation, and in no way militate against the use of the agent, while they teach us a most important lesson. Any narcotic, as opium, or belladonna, for instance, is dangerous, and may prove fatal when given in an over dose, and so is chloroform when improperly administered. In the succession of effects, as noticed during its slow and gradual inhalation, the ganglionic system is the *last* in the sequence to become involved, and the contractions of the heart the *last* of the vital actions to be arrested; but the *order is reversed* when the lungs have been suddenly overcharged with the *undiluted* vapour, for the patient may die from the direct effects of the chloroform upon the heart before insensibility has been produced, and the nervous centres of the encephalon affected; nay, the peristaltic action of the heart may cease even before the respiratory movements have been totally abolished. It more generally happens, however, that the arrest is simultaneous of the action of the heart and the lungs, or that the respiratory movements are primarily paralysed, and the patient dies from asphyxia. Still, it is manifestly obvious that the blood in the coronary arteries is far *more highly* charged with chloroform than that in any other part of the system, the lungs

excepted, and the instantaneous arrest of the peristaltic action of the heart, as the consequence of an overdose, is an *alarming contingency*, and must have happened in the case which occurred at the Hôtel Dieu, at Lyons, where the heart ceased to beat before the breathing had stopped. As Dr. Sibson has justly observed, "the chloroform penetrates the heart from the lungs by a single pulsation, and at the beginning of the next systole the blood charged with the vapour is sent through the coronary arteries to the whole of the muscular tissue of the heart," so that the danger to the heart, to its peristaltic action, is great from an overdose, and becomes still more imminent in the case of organic disease.

The great source of danger in the administration of chloroform is this *rapidity* of action when suddenly inhaled *undiluted* without a sufficient intermixture of air; but when the surgeon, to use the words of Dr. Snow, has as distinct an idea of its nature and of its physiological effects as he has of the blade of his knife, he will administer the one with as much safety as he can use the other.

The effects arising from its cumulative property in the system, after the inhalation has been discontinued, are not to be overlooked; but against these, and the danger arising from the rapidity of its action, as it is easy so is it our bounden duty to guard and provide: above all, it is incumbent upon us to see that the play of its action be *carefully and narrowly watched* by a competent *observer*, as an undue protraction of the inhalation may bring the patient to the very threshold of death. The eye of the administrator ought never to be off the face of the patient; for it cannot be denied that chloroform destroys life as certainly as carbonic acid, if respired until the *excito-motory and ganglionic* systems come fully under its dominion. But as immunity from pain is found to be persistent for some time after all the other suspended functions have been regained, the inhalation ought not to be unnecessarily prolonged. As the chloroform is again eliminated from the blood, and passes off from the body *unaltered* chiefly by the breath, it may be fairly inferred that it acts in its *integrity as a whole*, and not by its separate elements upon the vesicular matter of the nervous centres, and consequently

that beyond the direct and immediate effects produced by its *presence* in the circulation upon these centres, no lasting ulterior or injurious consequences can reasonably be expected to result from its administration.* And although the range of its action as a therapeutical agent may thus be limited, and its effects transient, present relief from pain is a real boon to the sufferer, and its *modus operandi*, in regard to the different nervous centres, points plainly enough to the class of medical cases in which its administration has been found to afford great, and often immediate relief.

In neuralgia, by allaying the paroxysmal agony it gives confidence to the mind of the patient, and relieves it of that painful foreboding and sense of depression which the recurrence of the periodic attack is so prone to excite. In spasmodic asthma, when inhaled during the fit, by subduing the spasm it affords present relief. In delirium tremens it has been found a valuable adjuvant to opium and morphia. When opium or morphia, given in full and repeated doses, has failed to procure sleep or to tranquillize the patient, its inhalation has been attended with the happiest results.

The hysterical paroxysm, violent and unmanageable as we are sometimes

called upon to witness it, has often by its influence been calmed down "to the stillness of soft sleep." Temporary relief, and at times more lasting benefit, has resulted from its use, in hysterical and puerperal mania, and especially, in the incubation of that form of mental derangement in which there exists an excited and disturbed condition of the emotional states, and where the great indications are to procure rest, quiet motorial excitement, and to calm fearful apprehensions and despondent feelings. In certain convulsive and spasmodic affections, in puerperal convulsions, chorea, and epilepsy, it has been inhaled with advantage, and even in tetanus it has been thought to be useful. Still it is chiefly if not entirely as ancillary, in such cases, to the adoption of more efficient curative measures, that we can view it in the light of a therapeutical remedy. But in all cases in which the induction of anæsthesia is a desirable procedure, we have in chloroform a most valuable agent, and one which for many obvious and cogent reasons has superseded the use of ether, in surgical and obstetric practice.

A distinguished fellow of this society, the late Mr. Liston, was the first in this country to test the value of *anæsthesia* in the capital operations of surgery. He hailed with enthusiasm the announcement from America, that a new light had burst upon surgery, and that on mankind a large boon had been conferred. "Mr. Liston," says Professor Miller,* struck the key-note, and a pealing note it was: it sounded throughout the length and breadth of the land. The profession were surprised, excited, and charmed in the mass, and more especially those on the junior side of the grand climacteric. The elderly gentlemen had their preconceived and heretofore settled notions sadly jostled and disturbed; not a few grew irritable, and resented the interference; they closed their ears, shut their eyes, and folded their hands; they refused to touch or in any way to meddle with the unhallowed thing; they had quite made up their minds that pain was a necessary evil and must be endured; they scowled on the attempted innovation, and croaked that no good could come of it. On, notwithstanding, has

* Dr. Snow, in his valuable series of papers now in the course of publication in the *MEDICAL GAZETTE*, has not only shown that the *inspired* chloroform and ether are again exhaled *unchanged* from the blood, but also the important fact that there is a *diminution* of the amount of carbonic acid formed in the system while it is under their influence, and, in consequence, a reduction of the temperature of the body. Maintaining, as he does, "that the animal functions, as sensation, motion, &c., and even intellectual action, are as closely connected with certain processes of oxidation going on the body, as the light and heat of flame are connected with the oxidation of the burning materials in common combustion" he is led to infer that the *specific effect*, which results from the *presence* of chloroform and ether in the blood upon the vesicular matter of the nervous centres, is due to their limiting, and eventually arresting, those combinations between the oxygen of the arterial blood and the vesicular matter, which are essential to sensation, motion, and psychical action,—in other words, to *diminished oxidation in the nervous centres*. It cannot be denied that the *reduction* in the amount of the carbonic acid formed in the system presents us with positive evidence of *diminished oxidation* in the tissues of the body, and that this diminished oxidation is *not* owing to the combination of the chloroform or ether itself with the oxygen of the arterial blood. Dr. Snow has adduced other proofs, besides the important and striking fact, of the elimination of the inhaled chloroform or ether *unchanged* from the blood by the lungs. *MEDICAL GAZETTE* for April 11th, 1851.

* Principles of Surgery, by James Miller, F.R.S.E.

sped the movement. The thing was too vast, the first impulse too strong, and the promoters too numerous and nimble, to be obstructed." And chloroform is now so universally exhibited, in all the greater and more painful operations of surgery, in our public hospitals and in private practice, that it is unnecessary to dwell upon the subject. Its administration in such cases has become the doctrine of the schools, and it is justly considered as a great boon to operative and dental surgery.

The induction of anæsthesia, and the use of chloroform in midwifery, have given rise to much discussion, and the expression of opposing sentiments. Dr. Simpson, to whom we are indebted for the introduction of chloroform as an anæsthetic agent, has employed it more extensively and successfully in obstetric practice than perhaps any other practitioner in the United Kingdom; but properly and fully to appreciate its value, it is manifestly obvious that we must study its effects in their relation to the physiology of parturition. Now great light has been thrown upon this latter subject, by the researches of two distinguished fellows of this Society, Drs. Robert Lee and Marshall Hall. Well do I remember the time, during the period of my pupillage, when the existence of muscular fibres in the structure of the uterus was the subject of grave discussion; but the revelations of the microscope have set that question, as they are destined to do others, at rest. And to Dr. Robert Lee we are indebted for unravelling and demonstrating the nervous endowments of the uterus, its ganglia, or plexuses. He appeals to nature in confirmation of his views, and what he has seen truly, others will see duly, for nature is consistent with herself.

To Dr. Marshall Hall, as the expounder of the doctrine of reflex action, is due the honour of rendering clear and intelligible much that was previously obscure, if not inexplicable, in the parturient process. His expositions have been more fully appreciated and applied in obstetrics by Dr. Tyler Smith, than by any other writer on midwifery with whose works I am acquainted, though from the passage quoted by him, from the first edition of the Human Physiology, it is evident that Dr. Carpenter was among the *first*

to perceive and appreciate the influence of remote reflex actions in effecting the expulsion of the child from the uterus.

I cannot subscribe to the opinion advocated by Dr. Tyler Smith, that the *muscular excitability* of the uterus, at the period of parturition, is dependent upon *extra-uterine excitement*, and that it is ovarian excitement which induces both the permanent contraction of the uterus, immediately before the coming or of labour, and the tendency to those reflex, emotional, and peristaltic actions by which parturition is completed.* My own mind rests in the conviction that *the primary and normal action of the uterus at parturition is peristaltic*, and exerted through the instrumentality of its own ganglionic nerves, and *not reflex*; while at the same time I am aware of the important influence and active agency of spinal reflex actions in promoting and completing the parturient process.

The cerebro-spinal system, though not an essential, still plays an important part in parturition, for the influence of volition, emotion, and the painful throes of labour, are not to be overlooked. Now in the sequence of effects from the inhalation of chloroform, as the spinal and ganglionic systems, on which the parturient act essentially depends, are the *last* to come under its dominion, we run no risk of interfering with or of arresting their actions, if we use common care and ordinary prudence in its administration. The first effects of the inhalation upon the excito-motory or spinal system, like that upon the other nervous centres, is undoubtedly of an *exciting character*, and is calculated, in consequence, to advance the parturient process. But the continued inhalation, it is not to be forgotten, is attended with *other* effects. And while on the one hand it induces a state of relaxation and dilatation of the passages and outlet which is highly favourable in labour, it is attended, on the other hand, with such a weakened condition of the reflex actions, that the spinal contractions become deficient in expulsive power, and delivery is often not only retarded, but the completion of the process is effected chiefly, if not solely, through the activity of the ganglionic system of the uterus itself.

* Parturition, and the Principles and Practice of Obstetrics, by Dr. Tyler Smith.

In those cases of labour where we meet with excessive motor action, and at the same time a rigid and unyielding state of the os uteri, passages, and outlet, the advantages arising from the induction of anæsthesia are strikingly manifest. In instrumental midwifery, and in cases of turning, where the patient is nervous, restless, or unmanageable, which sometimes happens, we have a most valuable auxiliary in chloroform. It is not necessary in such instances to carry the inhalation beyond what is required in operative surgery, and less than this will amply suffice in ordinary cases, where our main object is to allay fearful apprehensions, and quiet emotional uneasiness, or to assuage the agony of the last parturient efforts. The fact that immunity from pain may be secured without the suspension of intellectual consciousness, ought never to be forgotten in obstetric practice. In those cases of abnormal parturition, in which there is a decided want of motor power, the use of chloroform *at all* is a questionable procedure, for, beyond the first exciting effects upon the excito-motory system, its further inhalation may tend rather to aggravate than to remedy the evil in existence. I am strongly inclined to the opinion, that in ordinary and normal labour, *as a general rule anæsthesia is uncalled for*, and in consequence in such cases I have rarely induced the condition. At the same time, it must be admitted that there are other cases, preternatural and instrumental, in which its induction is a most desirable procedure alike to the accoucheur and his patient, and I cannot conclude this communication without giving expression to the opinion, that by the introduction of chloroform into use, Dr. Simpson has conferred a valuable boon upon the obstetric practitioner.

15, Norfolk Street, July 1851.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 7th August, 1851:—Alonzo Henry Stocker, Sloane Street, Chelsea—Charles Henry Tovey—William Henry Pearse, Launceston, Cornwall—William Williams, Birmingham—Sidney Haynes, Sandwich, Kent.

PATHOLOGICAL STUDIES ON THE BODIES OF THE DROWNED.

BY FRANCIS OGSTON, M.D.
Aberdeen.

[Continued from last vol. p. 857.]

PART III.*

II. *Internal appearances.*—These, as gathered from the post-mortem inspections of 53 of the bodies,—in so far as not already anticipated,—will now be noticed, mostly in the order in which they presented themselves.

Examination of the head.—Some of the appearances, both without and within the cranium, were enumerated in a previous paper (vide Part I. § 10, Wounds, Contusions, and Fractures; § 11, Morbid appearances within the head; § 12, Pseudo-morbid Discolorations, Softenings, Infiltrations, and Emphysema; Erosions, Saponification, and Blanching of the bones). Those which remain to be adverted to respect chiefly the distribution of the blood in these parts.

1. *State of the scalp.*—The condition of the scalp on dissection was noted as under:—

| | |
|----------------------------------|----------|
| Absent in | 5 cases |
| Bloodless in | 1 case |
| Natural in | 14 cases |
| Congested in | 26 „ |
| Very much congested in | 7 „ |
| | — |
| | 53 |

The *deficiencies* of the scalp were from the erosions noticed at Part I. § 12 (*Erosions*).

The *anæmious* scalp existed in the second of the bodies adverted to at Part I. § 10 as having suffered extensive injuries in the water.

The bodies in which the scalp was *natural*, with one exception in May, all belonged to the colder months from September to April inclusive; 6 of them were examined at periods after death varying from 14 to 29 hours, and conse-

* In Part II. of this paper, published in our last volume, the following corrections require to be made:—At p. 854, col. 2, line 37, for “21·4” read “20·8;” p. 855, col. 1, l. 12, for “observations” read “observation;” p. 855, col. 1, l. 31, for “81” read “18;” p. 855, col. 2, l. 11, for “varying” read “averaging;” p. 855, col. 2, l. 23, for “24” read “20” hours; p. 855, col. 2, l. 37, for “3” read “4” times; p. 856, col. 1, l. 60, for “13” read “12.”

quently while the bodies were still fresh. The remaining 8 had been dead from 7 to 50 days, and putrefaction in all had made progress.

In 3 of the bodies in which the scalp was *congested* the time of death was not ascertained; 19 of them had been dead from 14 to 71 hours (average 36 hours); the remaining 4 had been so from 4 to 26 (average $15\frac{1}{2}$) days each.

The *highly congested scalp* was met with from 11 to 18 hours after death: in one of these blood in some quantity oozed out from the surface of the skull on its exposure.

2. *State of the sinuses and larger veins within the head.*—These were observed to be in the following conditions—viz.:—

| | |
|------------------------------|---------|
| Partially destroyed in . . . | 1 case |
| Empty in | 7 cases |
| Natural in | 12 „ |
| Loaded in | 26 „ |
| Unusually turgid in . . . | 7 „ |
| — | 53 |

The *first* of these cases was that of an infant whose body had been 56 days in water. The scalp was eroded, the sutures on the vertex were open, and through these the encephalon had made its escape.

In 2 of the cases in which the sinuses and veins were *empty*, the period of death was not known; the remaining 5 of them had been dead from 4 to 50 (averaging 28) days.

Of the instances in which the sinuses and veins were *natural*, or moderately full of blood, the period of death was unknown in 1; in 7 of these it had varied from 14 to 48 hours; in the remaining 4 death had preceded respectively 10, 24, and 34 days. These last had all been examined in the month of December.

In the case of 24 of the bodies in which a *loaded* or turgid state of the sinuses and veins was discovered, the time of death was ascertained. 19 of these had been dead from 12 to $71\frac{1}{2}$ (averaging 33) hours: the remaining 5 had been so from 7 to 35 days. With the exception of the most recent of these, the others had been examined in the four coldest months.

4 of the instances of *unusual turgidity* of the sinuses and veins within the head had been examined from 12 to 18 hours after death; the remaining 3 had

been so respectively at 4, 8, and 20 days after submersion, and in the months of April, January, and November. Of these last, the first was deeply intoxicated at the time of his death; of the second nothing was known; the third had committed suicide while labouring under delirium tremens.

3. *State of the meninges.*—These were found as under—viz.:—

Dura mater.

| | |
|--------------------------|----------|
| Partly wanting in . . . | 1 case |
| Unusually pale in . . . | 1 „ |
| Natural in | 43 cases |
| Injected in | 5 „ |
| Minutely injected in . . | 3 „ |
| — | 53 |

Arachnoid membrane.

(Vide Part I. § 11, Abnormal Appearances within the Head.)

Pia mater.

| | |
|--------------------------|----------|
| Absent in | 1 case |
| Natural in | 35 cases |
| Injected in | 6 „ |
| Minutely injected in . . | 11 „ |
| — | 33 |

4. *State of the cerebral substance.*—This was

| | |
|--------------------------|---------|
| Absent in | 1 case |
| Pale in | 3 cases |
| Natural in | 26 „ |
| Congested in | 2 „ |
| Unusually congested in . | 21 „ |
| — | 53 |

The time of death in 2 of the cases of *pallor* of the brain was not ascertained; that of the remaining case was $11\frac{1}{4}$ hours. In this instance the scalp was congested, the pia mater injected, and the cerebral sinuses and veins turgid with blood.

The period of death was known in 24 of the bodies in which the brain was found *natural* or free from congestion: 10 of these had been dead from 12 to 48 hours; the remainder had been so from 4 to 50 days, or, on an average, upwards of 24 days each.

17 of the instances of *unusual congestion* of the brain had been dead from 11 hours 35 minutes, to 70 hours 35 minutes, or, on an average, upwards of 30 hours; 3 others had been so respectively 4, 7, and 29 days, and in the months of December, August, and October. The

last of these had been at the time of his death in a melancholic state, and was conjectured to have committed suicide.

5. *State of the cerebral ventricles.*—In the majority of the cases the ventricles presented nothing to attract attention. In 3 of the bodies they were observed to be empty and dry. These had been dead respectively 2, 8, and 24 days. In 8 of the bodies the ventricles were full of serum: of these 6 had been dead from 14 hours to 7 days; although, on an average, not more than $44\frac{1}{4}$ hours. In 11 of the bodies the ventricles were distended with fluid; and 10 of these had been dead from $11\frac{1}{2}$ to 70, or, on an average, rather more than 36 hours.

In one instance the serum in the ventricles was reddish, and in 3 others it had a decidedly spirituous odour.* These last were all known to have been cases of suicide, and to have been in drink at the time of their death. One of the bodies was inspected 25, and the second at 28 hours after death, while the third had not been long dead, judging from the condition of the body.

In 10 bodies, in all, there was a coincident deficiency of congestion in (or a natural state of) the scalp, the sinuses and veins, the membranes, and the substance of the brain. Two of them had been dead, the one 25, and the other 28 hours; 6 others of them, from 10 to 50 (averaging 27) days; and the remaining 2 for uncertain periods. 5 of

* The statement by the writer of the above fact, in connection with one of these cases in the 11th volume of the Edinburgh Medical and Surgical Journal (p. 293), led Dr. Christison, at p. 853 of the 3d edition of his "Treatise on Toxicology," to hint that in that instance the examiner might have mistaken the smell of the brain for that of alcohol. To that hint it is that we are indebted for the valuable essay of Dr. Percy "On the Presence of Alcohol in the Brain," the experimental trials in which have had the effect of deciding the controversy as to the possibility of spirituous fluids becoming absorbed, and reaching the interior of the brain.

In answer to Dr. Percy's question at p. 8, the writer begs to say that the "*physical* qualities" on which he rested his belief of the spirituous character of the fluid in the case in question were its *taste* and *smell*, and that his reason for omitting the *chemical* test was the impossibility of procuring a vessel of any sort to save it at the time, the inspection having been conducted in a vault under a church, and at some distance from any house where such an accommodation could be obtained.

He would only add that, in terming the fluid alcoholic, he did not mean thereby to imply with Dr. P. "that the 4 oz. of effused liquid which he detected in the ventricles consisted of *pure alcohol*."

these bodies exhibited pseudo-morbid redness of the membranous surfaces generally (vide Part I. § 12); in 4 of them there were pseudo-morbid effusions into the cavities of the body; and in 3, serous infiltration into the subcutaneous areolar tissues of the scalp, neck, and chest.

6. *State of the spine.*—The veins in the upper part of the spinal canal, in common with the jugular and vertebral veins, in general partook of the congestion of the cerebral tissues. In 2 cases, however, it was observed that the veins within the spine were unusually congested where the vessels within the skull were nearly in their natural condition in this respect.

7. *State of the upper part of the alimentary tube, and of the air-passages generally.*—Some particulars connected with the former of these canals have been anticipated in a previous paper (vide Part I. § 7, State of the Mouth; § 8, Position of the Tongue). Others relating to both the alimentary and air-tubes will fall to be noticed in the sequel (vide § 16, Froth of the Drowned; and § 17, Water in the Body).

Condition of the pectoral viscera.—The morbid and pseudo-morbid states of these have been already adverted to in Part I. §§ 11 and 12. Here it will only be necessary to consider the quantity of blood present in the heart and lungs.

8. *State of the cavities of the heart.*—Interior of the right heart:

| | |
|--|---------|
| Entirely empty in | 2 cases |
| Merely moist in | 1 case |
| Containing a little blood in | 3 cases |
| Nearly full in | 3 " |
| Full in | 15 " |
| Distended with blood in | 17 " |
| Inordinately distended in | 12 " |

53

The instances of *entire emptiness* of the right auricle and ventricle of the heart were encountered in bodies, one of which had been 56 days dead, and the other for an uncertain though evidently a considerable period. In the first of these the interior of both the auricle and ventricle was dyed of a deep reddish-black hue.

The *mere moistness* of the same cavities was noticed in a body which had been 50 days dead.

The bodies whose right cardiac cavi-

ties contained a little, and but a very *little blood*, had been dead respectively 8, 29, and 32 days. In one of these, what blood was present was in the state of clot.

Of the bodies in which the right heart was *nearly full* of blood, 1 had been but $11\frac{1}{4}$ hours dead, while the others had been so respectively 4 and 20 days. In the first of these the blood in the ventricle, and in the second of them the blood in both cavities, was in the clotted state. In the first case, besides, there were general adhesions of the lungs to the walls of the chest and diaphragm, and the right side of the heart was attenuated, and its right cavities dilated.

The time of death was known in 13 of the instances in which the right cavities of the heart were full of blood. Of these, 4 had been dead from 16 to $55\frac{1}{2}$ hours; while the remaining 9 had been so from 7 to 35 (averaging 20) days. With one exception, in August, these 9 bodies had all been examined in the months from October to April inclusive. In a body 7 days dead, the walls of the right heart were deeply dyed with blood. In 2 of the more recent

bodies, the blood in the same part was clotted, as it also was in 1 where the period of death was not ascertained.

In the 29 cases in which the right auricle and ventricle were more or less markedly *distended* with blood, the period of death of 26 was known. Of these, 25 had been dead from 11 to $70\frac{1}{2}$ (averaging 29) hours; while the remaining case had been so for 4 days. In 7 of these the blood in the right heart was either partially or wholly coagulated, and in 1 other the parietes were dyed red.

Interior of the Left Heart.

| | |
|-----------------------------------|----------|
| Empty in | 14 cases |
| Containing a little blood | |
| in | 23 „ |
| Full, or nearly so, in | 14 „ |
| Distended with blood in | 2 „ |
| | — |
| | 53 |

In 5 bodies the blood in the left cavities of the heart was either partially or wholly clotted.

The comparative amount of blood in the two sides of the heart was as under, viz. :—

Left Heart.

| | |
|----------------------------------|----|
| Empty in | 14 |
| A little blood in | 23 |
| Full, or nearly so, in | 14 |
| Distended in | 2 |
| | — |
| | 53 |

Right Heart.

| | |
|-----------------------------|------|
| Empty in | 2 |
| Merely moist in | 1 |
| A little blood in | 2 |
| Nearly full in | 1 |
| Full in | 3 |
| Distended in | 5—14 |
| A little blood in | 1 |
| Nearly full in | 2 |
| Full in | 12 |
| Distended in | 2 |
| Inordinately distended | |
| in | 6—23 |
| Distended in | 12 |
| Inordinately distended | |
| in | 2—14 |
| Inordinately distended | |
| in | 2—2 |
| | — |
| | 53 |

9. *State of the lungs.*—These viscera were—

| | |
|-----------------------------------|---------|
| Free from congestion in | 3 cases |
| Sparingly congested in | 9 „ |
| Congested in | 25 „ |
| Highly congested in | 16 „ |
| | — |
| | 53 |

One of the bodies in which the lungs

were *free from congestion* had been 32, and a second 56, days dead. The period of death in the third was not learned.

The period of death was ascertained in 8 of the instances of *sparing congestion* of the lungs. 4 of these had been dead from $11\frac{1}{4}$ to 67 hours. In each of these there were morbid states present in the chest, capable of affecting the condition of the lungs. Thus in 1, dead

11 $\frac{1}{4}$ hours, the right heart was affected with dilatation and attenuation of its walls, and was only partially filled with blood, while there were general adhesions of the lungs to the chest and diaphragm. In 1, dead 11 hours 35 minutes, there was general hypertrophy of the heart. In 1, dead 16 $\frac{1}{2}$ hours, the right lung was adherent to the side, and the liver, spleen, and kidneys were all much hypertrophied. In the remaining case the heart and other viscera were loaded with fat, and the liver granular and much enlarged. The 4 other instances of sparingly congested lungs had been dead respectively 8, 20, 21, and 50 days.

In 4 of the instances of *congested* lungs the period of death was not known. In 12 of them it had ranged from 12 to 55 $\frac{1}{2}$ (averaging fully 32) hours. In the remaining 9 it had ranged from 4 to 35 (averaging nearly 18) days. 7 of these last were examined in the six winter months.

14 of the bodies with *highly congested* lungs had been dead from 12 $\frac{1}{2}$ to 71 $\frac{1}{2}$ (averaging about 27 $\frac{1}{3}$) hours. The remaining 2 of them had been so respectively 10 and 29 days. These last were examined in February and October.

In 2 out of the whole number of bodies inspected the lungs were *collapsed*. One of these had been dead 50 days, the other for some time, though the precise period was uncertain. In 15 other bodies the lungs were so fully *expanded*, that they rose out of the cavity of the chest on the removal of the sternum. 5 of these had been respectively 7, 8, 10, 21, and 56 days dead, and in all there was pseudo-morbid emphysema of the lungs (vide Part I. § 12). 2 others of them appeared to have been several days dead, though the time was not ascertained. The remaining 8 of them were fresh bodies dead on an average not more than 26 hours.

Condition of the abdominal viscera.—

Several particulars relative to these have been anticipated at pp. 765, 6, 7 (vide § 11, Morbid Appearances within the Belly; § 12, Pseudo-morbid Appearances in the Interior of the Bodies, &c.) The state of the stomach will be noticed in the sequel (vide Water in the Body, § 17). We have here only to advert to the distribution of the blood in the liver, spleen, kidneys, and intestinal tube, and to the state of the bladder:

10. *State of the liver.*—

| | |
|-------------------------|-----------|
| Free from congestion in | . 9 cases |
| Slightly congested in | . 2 „ |
| Congested in | . 23 „ |
| Highly congested in | . 19 „ |
| | — |
| | 53 |

In 7 of the subjects in which the liver was *free from congestion*, the time of death was made out. 4 of these had been respectively 32, 34, 50, and 56 days dead. The remaining 3 had been so 11 $\frac{1}{4}$, 25, and 45 hours. In the first of these three the liver was much enlarged and granular.

In the 2 cases of *slightly congested* liver the parties had been dead respectively 4 and 20 days, and were examined in the months of Oct. and Nov. In both a quantity of blood had transuded into the cavity of the belly.

In 20 of the instances of *congested* liver the time of submersion was ascertained. In 14 of these this had varied from 12 to 67 (or, on an average, rather more than 32 $\frac{1}{2}$) hours. In the remaining 6 it had ranged from 7 to 35 (averaging 21 $\frac{2}{3}$) days. With one exception, in August, these last had been all examined in the three winter months.

The time of death was known in 18 of the subjects in which *unusual congestion* of the liver was found. In 13 of these it had varied from 11 $\frac{1}{2}$ to 70 $\frac{1}{2}$ (averaging under 25) hours. In the remaining 5 it had amounted to 4, 8, 10, 10, and 29 days respectively. The bodies of these last had been examined in the months of October (in 2), December, February, and April.

11. *State of the spleen.*—This was met with in a state of moderate congestion in 19 of the bodies.

12. *State of the kidneys.*—These were

| | |
|-------------------------|------------|
| Free from congestion in | . 15 cases |
| Congested in | . 30 „ |
| Highly congested in | . 8 „ |
| | — |
| | 53 |

In 1 of these last the pelvis of the kidney had a decidedly spirituous odour. The party, a female, was drunk at the time of her death.

13. *State of the intestinal tube.*—Venous congestion of the intestinal tube was only met with in 17 of the bodies, and in 11 of these its seat was confined to the smaller intestines. In 13 cases in which the time of death was known, the congestion of this tube was encoun-

tered at periods which averaged $30\frac{1}{2}$ hours after submersion.

14. *State of the blood.*—The blood throughout the body was in a liquid state, with the exceptions already noticed (§ 8 *pass.*), where blood in a state of partial or complete coagulation was encountered within the cavities of the heart, and in 2 others, where clotted blood was found in the larger blood-vessels immediately connected with the heart. The number of subjects in which clotted blood was met with was 15, or 28 per cent. of the whole. In 4 of these it was encountered simultaneously in the right and left sides of the heart. With 1 exception the blood was dark hued in all.

15. *State of the urinary bladder.*—This was found

| | |
|------------------------------|----------|
| Empty in | 27 cases |
| Full in | 10 " |
| In the intermediate state in | 16 " |
| | — |
| | 53 |

In two instances the urine was reddish,—the one being in a body 45 hours, and the other in one 24 days dead. In a body $45\frac{1}{2}$ hours dead, the fluid in the bladder was tasteless, and contained but a mere trace of the usual solid ingredients. In inspecting the body of a male fourteen hours dead, and who had been in a state of intoxication at the time, on heating a little of the urine to verify the presence of albumen in it, the vapour caught fire. On subsequently introducing an ounce of this urine into a retort with carbonate of potass, a small quantity of fluid came over in distillation, which acted characteristically with the bichromate of potass and sulphuric acid.

16. *Froth of the drowned.*—If to the bodies merely viewed, and in which froth was noticed at the lips and nostrils, and in the mouth, we add those in which inspection revealed its presence in addition in the larynx, trachea, bronchi, and pulmonary air-cells, we find that this phenomenon was observable at one or more parts of the air-passages in 56 (or 48.9 per cent.) of the observations. In 51 of these, in which the period of death was known, this had ranged from 19 or 20 minutes to 4 days, averaging rather more than 22 hours. In 30 of these last, examined in the six winter months, the time of the appearance of the froth ranged from 19 or 20 minutes

to 96 hours, with an average of 30 hours 13 minutes. In the remaining 21 instances, examined during the six summer months, this sign was encountered at periods after death ranging between $1\frac{1}{2}$ and $55\frac{1}{2}$ hours, with an average of 14 hours 36 minutes. Although thus in these cases the froth was observed, on an average, to have appeared earlier in the summer than in the winter half-year, the reverse was found to hold good when the two or three warmest and coldest months of each season were contrasted. Thus, in 11 observations in our 3 hot months (June, July, and August), the froth was not met with earlier than from $1\frac{1}{2}$ to $30\frac{3}{4}$ hours, with an average for each of 10 hours 35 minutes after submersion; while in 3 observations in our two very cold months (December and January) the period of its appearance ranged betwixt 19 or 20 and 40 minutes, averaging $29\frac{1}{3}$ minutes. A similar result was obtained in contrasting the 3 spring and the 3 winter months, the average period after death of the froth being encountered at the former season being 34 hours 59 minutes, and 24 hours 46 minutes at the latter of these.

In the above observations the peculiar froth of the drowned is distinguished from the frothy mucus and the bubbles of fetid gas on the surface of watery fluid occasionally encountered in the air-passages of putrid bodies. Appearances of these last sorts were seen in 5 of the bodies at periods after death respectively of 7, 24, 26, 35, and 50 days.

The relative frequency of the froth of the drowned at different parts of the air-passages in the cases under notice was as follows—viz. :—

| | | | |
|-------------------------------|----------|---------------|--|
| 1. In the <i>observations</i> | | | |
| at the nostrils, | 20 times | (12 times co- | |
| | | piously) | |
| „ lips | 27 | „ (17 ditto) | |
| in the mouth, | 34 | „ (14 ditto). | |
| 2. In the <i>inspections</i> | | | |
| in the larynx, | 16 times | (9 times co- | |
| | | piously) | |
| „ trachea, | 25 | „ (10 ditto) | |
| „ bronchi, | 11 | „ (9 ditto) | |
| „ air-cells, | 27 | „ (18 ditto). | |

The froth was reddish in 4 of the separate observations at the lips, in the mouth, in the trachea, and in the pulmonary air-cells, respectively. As already noticed (Part I. § 15), mud was

found in the mouth in 2 instances. Mud was also found in the trachea in 1 case. In the two former of these the parties had been dead respectively $6\frac{1}{2}$ hours and 10 days. Of the third, nothing was certainly known. The body appeared, however, to have been several days in water. The simultaneous presence of both water and froth in the air-passages will be adverted to in the succeeding section.

17. *Water in the interior of the body.*—Water was encountered in some one or more of the parts in the interior of the body in 54 of the 90 individuals examined,—i. e. in 60 per cent. of the whole. The relative frequency of this fluid in the various parts in which it was found was as under—viz. :—

| | |
|-----------------|-----------|
| In the mouth in | 10 cases. |
| „ throat in | 2 „ |
| „ œsophagus in | 8 „ |
| „ trachea in | 25 „ |
| „ lungs in | 22 „ |
| „ stomach in | 36 „ |

In 16 of the instances of water in the interior of the lungs the quantity of the fluid was considerable. In 13 out of the 22 cases the water was frothy.

The quantity of water in the stomach varied from one or two ounces up to a bulk of this fluid sufficient to distend the viscera to a considerable extent. In only five of the cases was the fluid found to be pretty pure and clear. In one of these it was evidently brackish water, such as the person had been drowned in (in the Harbour). In seven of the cases the fluid in the stomach had a spirituous odour.

In addition to the above instances of water in the body, this fluid was met with in two subjects in the cavity of the chest,—in the one to the extent of 10, and in the other to the amount of 25 fluid ounces,* the parties having been dead respectively 12 and 17 hours. In one of these cases the water was brackish. Both bodies were healthy adult ones.

[To be continued.]

MEDICAL GAZETTE.

FRIDAY, AUGUST 15, 1851.

Our readers are no doubt aware that the important question affecting the supply of the metropolis with water has been postponed till next session. On the whole, we think this is the wiser course. Hasty legislation on a subject of this magnitude could only have been attended with disastrous results. Besides, it must be obvious to all those who have given the least consideration to the question, that time is required for sifting the evidence taken by the Parliamentary Committee, and that the public, as well as our legislators, have a right to know the grounds on which any intended changes are to be made. Much of the present outcry against the waters of the Thames and the Lea may be traced to the mode in which the Board of Health professed to collect evidence on the Water question. The evidence which this Board received was *ex-parte* :—the witnesses were not subject to cross-examination—their means of knowledge,—their competency to give evidence or to draw inferences from facts, were not tested : and the readers of the Reports were allowed to find their way to the truth as they could. As it might have been anticipated, the evidence published in the Board of Health Reports is conflicting, contradictory, and, in some instances, contrary to well-ascertained facts. The Government could not rely upon conclusions drawn by incompetent persons from imperfect data : while the independent Commission appointed to report on the chemical qualities of the waters supplied to London, not only repudiated the favourite scheme of the Board, of collecting rain-water from the Bagshot sands, but demonstrated the

* Since the above particulars were arranged we have met with a still larger quantity of watery fluid in the chest of a healthy adult. This person had been dead, from drowning, from 19 to 20 days, and the body only recovered from the water a few hours previous to the inspection on the 24th of April last. The water in the cavity of the chest measured 32 fluid ounces.

fallacy, if not the untruthfulness, of the statements regarding the unwholesome and even noxious properties of the various river waters now supplied to London.

We anticipate that much good will arise from the publication of the evidence taken before the Parliamentary Committee, whose labours, after about forty days' inquiry, have just been brought to a close. It is not the intention of the Committee, at the present stage of the question, to make any report, but rather to allow the public to weigh maturely all that can be said in favour of or against the present mode of supply.

There are fortunately some points on which all are agreed,—namely, that there should be an abundant supply of water in all districts, streets, and houses, and that this supply should be afforded at a rate within the reach of the poorest inhabitants. The expense incurred by this desirable change, so far as the poor are concerned, should be borne either by the Government or by parishes. On the financial part of the evidence it is not our intention to enter; but we shall merely observe that the distribution of water over a vast city like London, at all hours of the day, and in almost unlimited quantities, as a mere mechanical question, must necessarily entail considerable expense, and the result will probably be, as in other cases,—the richer will pay for the poorer inhabitants. One fact is certain: the profits of the Water Companies have not been so large as represented, and their annual expenditure is considerable. Many alluring schemes professing to furnish a cheap supply have broken down when submitted to rigorous investigation; and some of those which are now offered for public favour simply contemplate the confiscation of the distributory pipes of the Companies, and a compulsory low charge for the water

supplied! Undoubtedly all articles may be obtained cheaply by such communistic schemes, but we do not think they are likely to find the favourable reception in England which they have met with in France. The evidence taken by the Parliamentary Committee will, we believe, throw a new light upon this part of the subject: and it is satisfactory to know that we are not to be handed over, for our daily supply of water, to a set of schemers who are ever ready to promise more than they can possibly perform. It is not at all improbable that the cost of the supply will be reduced for the middle and higher classes to the lowest charge compatible with the fair remuneration to which a Water Company, like a Railway, or any other Company making a considerable outlay for the public benefit, is fairly entitled; and we think that another good result will be—the free supply of water to the poor.

Starting from this point, there are, unfortunately, the most conflicting opinions regarding the *sources of supply* and the *quality of the water*. Some of the witnesses, in talking of the necessity of having a constant supply of sparkling and pure water, at a temperature of about 52°, at all seasons, always at hand in every house, have apparently forgotten that the daily supply of London amounts to forty-four millions of gallons! Considering the increase of population, we ought, under any new arrangements, to allow for the reception of at least *fifty millions of gallons*. This is a simple fact, of which no well-drawn picture of the purity of the mountain-streams of Wales or Westmoreland can get rid. The tempting description of Bala Lake water answers no practical end; it would, we believe, be just as possible to transport to London the bracing atmosphere of Plynlimmon or Snowdon, as to conduct to us, in their unmitigated

softness, purity, and coolness, the waters of the Lake of Bala. We hold, therefore, that the first requisite which our legislators are bound to regard is *quantity or sufficiency of supply*. It never can be permitted that one-half of the population of London should be supplied with a purer water than that now received, if the other half is thereby to incur the risk of an insufficient supply. The calculations of enthusiastic engineers respecting the millions of gallons contained in the Chalk basin of London, or of speculating meteorologists on the inches of rain which are to find weekly a natural filter-bed in the Surrey Sands, cannot be received as a guarantee against the possible infliction of a general drought on the metropolis. It would be obviously most unsafe to adopt any of these theoretical schemes, in which the chance of success is so uncertain, and the failure would be attended with such lamentable consequences to the entire population.

Engineers and scientific witnesses who have considered quantity as well as quality, have mostly concurred in the view, that, as a general rule, there is no better source of supply for a town than a large river; and in respect to London, it would be unadvisable, if not hazardous, to abandon the Thames and the Lea. Some who would reject the waters of these rivers, owing to their alleged contamination by sewage, still look to a river-supply, and advise that the water of the Colne should be taken in preference. Others, again, holding to the necessity of taking our metropolitan supply from the Thames, have advised a twofold plan—first, the diversion of the sewage of London to a point nearer to the sea; or, secondly, the taking of the water at a higher point in the river than that at which it is now taken by the London Companies. In regard to the first proposition, there can be no doubt of its pro-

priety; and with respect to the second, it must rest upon a chemical examination of the water, made at various seasons. In the meantime, if we look to *quantity or sufficiency of supply*, and to *certainity in its permanence*, the Thames stands unrivalled.

The only witness of any scientific repute, who gave evidence before the Board of Health on the source of water for the metropolis, was Dr. Clark, and we find, in the report of his evidence, the following question and answer:—

“91. On the whole, from your consideration of the subject, you think the Thames would probably be the source from which to derive the additional supply to the metropolis?”

“DR. CLARK.—For this reason as well as others, that where there is such a river there is an *inexhaustible supply*; and there are so many instances where, having started with a limited supply, the inhabitants have experienced considerable inconvenience from a deficiency, that *I do not think it would be desirable to look for a supply from any source but a large river.*”*

In spite of this strongly expressed scientific opinion by a selected witness, the Board reported adversely to it, and recommended the absolute rejection of Thames water chiefly on the ground of its *excess of hardness*; and as if to add to the absurdity and irrelevancy of this conclusion, the Government Commissioners recently appointed to examine the whole question of water-supply, recommend for selection a water which is *four degrees harder* than that of the Thames! Unfortunately, however, the water so recommended fails in two requisites which no ingenuity, chemical or mechanical, can supply—namely, first, quantity or sufficiency; and second, certainty in its permanence. Under these circumstances, it is not probable that our legislators will reject a cer-

* Report on the Supply of Water, Appendix No. 111, page 180.

tainty for an uncertainty; and although they may admit the water of the Chalk basin of London to be well adapted for domestic use, in spite of a degree of hardness one-fourth greater than that of Thames water, they will not reject the latter until some equally abundant, equally accessible, and equally permanent source has been proved to exist.

Reviews.

Reform der Orthopädie, in 60 Thesen durchgeführt.

(*Reform of Orthopædic Surgery, propounded in Sixty Theses.*) By Dr. WERNER, Director of the Orthopædic Institution at Königsberg in Prussia. 8vo. pp. 206. Berlin. 1851.

As the author of this work has bestowed much attention upon his subject during many years, his opinions upon this important branch of surgery demand especial attention at our hands. We shall therefore first, in as few words as possible, present Dr Werner's propositions, and afterwards notice the manner in which he establishes them.

The propositions, or theses, are as follows:—1. A muscle is at rest after each action; in the intervals of action the muscle is not in a state of tension. 2. The muscle cannot elongate itself after it has shortened itself. 3. There are three modes of muscular activity—contraction, resistance (*die Renitenz*), and oscillation. 4. When a muscle acts it does not always exert the maximum of its power. 5. The maximum power of a muscle is not a constant quantity. 6. Muscular power is not in direct relation to the size of the muscle. 7. A muscle, in every possible position of the limb, can be active or at rest accordingly as by that position it may be elongated or shortened. 8. The position of a limb whereby a muscle is shortened or lengthened does not determine its activity or state of rest. 9. The active state of a muscle becomes painful if more or less prolonged; the state of rest is accompanied with pleasurable sensations. 10. Almost all muscles have antagonists, although these are not always equivalent in number, bulk,

or power. 11. An equilibrium by the antagonist muscles does not exist; the continuance of such a proportioned exertion during the whole of life is equally impracticable and unnecessary. 12. There does not exist any necessity for a balance of the power of the antagonist muscles, where two muscles have a common motion with a third—the least inequality would produce deformity. 13. If an antagonist be paralysed, or altogether destroyed, it does not follow that the limb should necessarily assume a position towards the maimed side, and deformity inevitably follow. 14. The right arm, in cases of lateral curvature, is not stronger than the left—at all events, in no greater proportion than in straight persons. 15. If the power of the trapezius or of the arm actually preponderate, the vertebral column is not thereby drawn to the same side. 16. Neither the right nor the left side is the stronger in scoliosis (*spinal curvature*). 17. The detection, in a case of scoliosis, of those muscles which are active, or are stronger than their antagonists, is impracticable and unprofitable; since, after exertion, the activity of the muscles is entirely dispelled, and the stronger muscle does not exert the maximum of its power. 18. General muscular debility follows on lateral curvature, does not precede it, and cannot be its cause. 19. Increased activity of a muscle does not strengthen it and augment its size, but weakens it and causes it to waste. 20. The excess of muscular activity induces dangerous disease. 21. Diminished activity of muscles (relative rest) does not weaken or decrease their size; but, on the contrary, strengthens and augments their size. 22. Absolute rest produces wasting of the limbs, and is, proportionately to its duration, prejudicial to health. 23. General gymnastics have no influence upon scoliosis, and have only a general effect upon the system. 24. Special gymnastics are likewise without influence upon scoliosis; they have no local, but only a general effect: they fail in their object of curing this deformity. 25. The Swedish gymnastics have no influence over scoliosis: their use is entirely mechanical, and only tends to weaken the part affected. 26. Special, general, or Swedish gymnastics, are alike futile for the cure, amelioration, or prevention of scoliosis: they are equally useless auxiliaries to other

modes of treatment. 27. Frictions on the skin with spirits or oils do not reach the muscles for which they are destined; they neither strengthen nor weaken the muscles. 28. A muscle may be excited by acupuncture with galvanism or electro-magnetism; but this excitation does not strengthen, rather weakens the muscle. 29. The effects of a moxa may reach a muscle, but it does not increase its power. 30. The strengthening of individual muscles is not attainable, and would be, moreover, superfluous. 31. A muscle in contraction is shortened in all its parts, if it be sound and have its normal extent: this shortening remains unchanged even after death. 32. The contraction of a muscle can only take place in the direction of the limb; otherwise disease is induced. 33. Muscular contraction is curable in a twofold manner—1, by gradual continuous extension; 2, by division of the tendon. Paralytic contraction is incurable. 34. Division of the tendon only cures the contraction when an intervening hard medium is formed between the corresponding ends. After the operation pain in the part frequently remains, and the muscle does not regain its normal power. 35. Section of the muscles does not permanently remove the contraction. 36. Muscular contraction does not precede scoliosis. 37. If, in the fourth degree of lateral curvature of the spine, there be habitual contraction of the muscles of the back, and these be divided by the knife, their section is useless; first, when the vertebral column cannot be so far straightened that the proper intervening medium can be formed; and the muscles thereby elongated; secondly, when the incision does not divide the cellular sheath of the tendon, but the muscle itself, or its aponeurosis, a cicatrix with shortening then follows. 38. The spinal muscles which are usually divided cannot cause or maintain scoliosis, and those which should be divided cannot be reached by the knife. 39. Rhachimyotomomy is not adapted for the cure or amelioration of scoliosis; and, although favourable results have been supposed to follow tenotomy, the reverse has often been observed. 40. Extension cannot rectify a spinal curvature. 41. Yet continued extension will in a slight degree tend to maintain the spinal column straight. 42. Even if extension can set a curvature straight, and keep

it straight for a time, it can only contribute to the diminution of the wedge-shaped curvature. 43. Extension is not adapted to the cure or prevention of scoliosis: it has only produced slight amendment in the most favourable instances after long-continued use. 44. Pressure applied on the convexity of the sternum and on the spinal column is not adapted to the diminution of the peculiar deformity of scoliosis, but rather for its aggravation. 45. The weight of the head in the erect position can never cause spinal curvature, but it may increase the wedge-shaped distortion when it already exists. 46. The horizontal posture likewise is ill adapted to the cure, amelioration, or prevention of scoliosis: it may, however, in some measure retard its progress. 47. Arrest of development of the brain and spinal cord are often attended with distortion of the lower limb; nevertheless, the latter is not, probably, the consequence of the former. 48. Affections of the nervous system, especially of the central parts, are often followed by distortion of the limbs, which partakes of the nature of paralytic contraction of the muscles, and is incurable. 49. Scoliosis very seldom occurs with arrest in development of the brain and spinal cord at birth; such cases are not the subjects of medical treatment. 50. Scoliosis very seldom occurs in children as the result of affections of the brain or spinal cord. 51. In the ordinary respiration both of the sleeping and waking states, the thorax is but little raised; the respiratory act is performed by the diaphragm, nearly unaided by other muscles. 52. In deep inspiration the thorax is considerably raised: in effecting this the external muscles of inspiration alone are put in action. 53. Compression of one half the thorax does not produce augmented expansion of the other half; compression of the thorax or abdomen does not ordinarily excite increased difficulty of breathing. 54. The slight elevation of the ribs on the side of disease of the respiratory organs does not depend upon the inspiratory, but upon the expiratory muscles, which the patient disposes to resistance (*Renitenz*) in general from the local inutility of one lung. 55. The trapezius, sternocleidomastoideus, levator anguli scapulæ, are not muscles of inspiration. 65. Paralysis of the serratus magnus

has not yet been observed. 57. Paralysis of the serratus magnus, in relation to respiration, without the muscle being likewise paralysed with reference to its motor powers, is impossible. 58. Scoliosis cannot arise from paralysis of the serratus magnus. 59. Friction with caustic solution of ammonia, gymnastics, and the use of a horizontal couch, will not remove paralysis of a respiratory nerve. 60. The treatment usually adopted at Orthopædic Institutions is not suitable for the cure or prevention of curvatures of the spine: the treatment there followed produces only very slight benefit after long-continued application, and its continuance is, after all, doubtful.

The author, in expounding the last proposition, reviews the various orthopædic systems, and insists upon two leading errors which, according to his observation, they possess; firstly, that in their various methods of treatment the body is regarded as an inanimate machine; secondly, that an erroneous position is assumed in regarding the muscles as existing in a constant state of equilibrium, independently of the influence of the will, or of the nervous system.

These two fundamental errors, the author states, are nevertheless clothed with an appearance of scientific character, and supported by a show of argument. The contradictory views of the theoretical, and the opposite modes of treatment of the practical orthopedists, are severely criticised by Dr. Werner, who announces the very unsatisfactory fact, as the result of extensive investigation, that lateral curvatures of the spine receive little or no benefit from any of the means hitherto employed. Dr. Werner exposes the fallacy of exhibitions of plaster casts before and after treatment by these various and contradictory methods, showing at the same time the ease with which, by putting the patient in certain postures, a very bad cast may be made out, and by placing the patient in a straight attitude a very good cast may be taken of the same individual (*"before and after treatment"*) *within one and the same hour!*

The author has little faith in the marvellous cures which are trumpeted forth by the promoters of each and every mode of treatment, however irreconcilable, either as to theoretical principles or actual practice; these

would, he observes, be reduced to nothing, were their results fairly and candidly brought to light.

The task of effecting this exposure, however, Dr. Werner regards as superfluous, as he considers that he has, in the demonstration of the preceding propositions, adduced physiological proofs, from experiments easy of repetition, that it is utterly impossible by gymnastics, extension, pressure, frictions, electricity, sea-bathing, &c., to cure habitual scoliosis, which has its origin either in a morbid condition of the muscles, or of the nerves, or of the osseous system.

The very full abstract which we have given of Dr. Werner's propositions renders it unnecessary that we should occupy further space in discussing the character of this work, as it is, moreover, only a first instalment of the author's complete exposition of the entire subject. They contain the physiological basis of Dr. Werner's therapeutic views, and we have therefore thought it advisable to set them all before the reader, as we shall probably refer to them on a future occasion. We must add, that each separate proposition, as here given, forms the subject of a separate thesis, in which it is fully discussed and illustrated by experiments, cases, or extracts taken from other authors. The extent to which our notice has already extended forbids our following the author through his proofs; at the same time the space we have devoted thereto gives evidence of the estimate we are disposed to put upon Dr. Werner's labours. He has, by facts and reasoning, shown that in lateral curvature of the spine, to which almost exclusively his observations are addressed, the modes of treatment hitherto practised have been attended with very questionable results; and he has done good service by pointing out that actual mischief has sometimes followed. It remains to be seen whether the author's suggestions on other points will be equally strongly substantiated. In a series of articles in the course of publication in a German periodical, the author relates several cases, with post-mortem examinations; and at the same time unmercifully exposes the results of the practice of tenotomy for the cure of spinal deformity.

Familiar Letters on Chemistry, in its Relations to Physiology, Dietetics, Agriculture, Commerce, and Political Economy. By JUSTUS VON LIEBIG. Third edition. Small 8vo. pp 530. London: Taylor, Walton, and Maberly. 1851.

THESE Letters have already acquired so high a reputation with the public and the profession, that we need do little more than refer to the publication of a third edition. We know of no more pleasing introduction to the study of chemistry than this volume affords. Its universal applications to arts, manufactures, and all branches of medical science, are here laid before the reader in a plain and popular form; although we must admit that some of the letters presuppose a tolerably well-grounded knowledge of the subject. Another feature, too, strikes us as likely to lead to the exposure of much scientific quackery—namely, the manner in which the author denounces certain quasi-medical opinions which have been given on subjects on which the public are incompetent to form a judgment. All the popular fallacies regarding the spontaneous combustion of the human body, in which even some educated persons have a sort of superstitious belief, are admirably exposed (Letter XXII.) A revival of this doctrine will be henceforth impossible. Again, those who have been induced to believe that the swallowing of a few stray *infusoria* in water may be attended with fatal results, will find some consolation in Letter XIX., in which the author incontestably proves by experiment that these minute organisms serve now, as they have in past ages, to work out the useful purposes of creation.

We recommend this book to every student of chemistry, and to all who are desirous of acquiring a knowledge of the advances recently made in this department of science.

Anatomia Uteri Humani Gravidi, tabulis illustrata, auctore GULIELMO HUNTER. *The Anatomy of the Human Gravid Uterus*, exhibited in Figures. By WILLIAM HUNTER. Folio, plates. Published by the Sydenham Society. 1851.

It is not usual to subject the proprietary works of publishing Societies to the criticisms of the reviewer; but the great value and importance of these plates will justify us in departing from this

rule. We shall, however, merely bring this work under our readers' notice as an instance of what may be effected by combination, and as a striking example of the rapid improvements recently made in the art of printing.

Dr. William Hunter's work is too well known to need description: it cannot fail to be most acceptable to the members of the Sydenham Society, who, as part of their yearly subscription, have thus become possessed of a work which they could not otherwise have obtained on any terms, as the original plates are not now to be met with except in medical libraries. The cost to the Society of the plates now issued, we are informed on good authority, has not exceeded seven shillings a copy, out of which three shillings would be required to cover the actual cost of paper. Thus four shillings only are left for the expenses of printing and binding; the whole work is therefore nearly as cheap as letterpress. By the transfer of the copper-plate impression to stone, these plates, the publication of which originally cost several hundreds of pounds, are now supplied to the members of the Sydenham Society, by Messrs. Day and Son, for a few shillings. One impression thus transferred will furnish two thousand copies. A thousand impressions would yield two millions of lithographs. The simple printing of the copper-plate engraving, exclusive of the charge for paper, would have cost three times the money at which these lithographic transfers can be provided.

The printing of these plates of Hunter's work is executed in the best style, and they furnish, as we have already observed, a very striking instance of the advances made in the art of printing on stone.

THE GENERAL BOARD OF HEALTH.

ON Monday two acts of Parliament were printed confirming certain provisional orders of the General Board of Health. On the 17th of September next, elections for local boards of health are to take place at the following places:—Morpeth, Bristol, Beverley, Sherborne, Bridgend, Bryn Mawr, Norwich, Gateshead, Doncaster, Borough of Weymouth and Melcombe Regis, Newmarket, Romford, Tenby, Kingston-upon-Hull, Hartlepool, Hastings, and at West Cowes on the 4th of September. By the second act the provisional order for Great Yarmouth, in Norfolk, is confirmed.

Proceedings of Societies.

ACADEMY OF MEDICINE, PARIS.

July 29, 1851.

Eclampsia, and its relations to Albuminuria in Lying-in Women.

M. DEPAUL read a note on a case of eclampsia, and submitted observations, of which the following were the conclusions:—

1. Convulsions, of an epileptic character, are rarely seen in the first four months of pregnancy. The case related is therefore interesting, as having occurred at the end of three months, in a person who previously had not been subject to epilepsy or any other nervous affection.

2. It is erroneous to state that the prognosis of eclampsia is more favourable in proportion as gestation is less advanced, or according as labour, if it have commenced, is distant from its termination.

3. This opinion is founded upon an inference not drawn from facts, viz., that the paramount indication of treatment is depletion of the uterus.

4. The dangers which threaten the fœtus consist in the modifications which the maternal blood undergoes, and in the disturbance of the uterine circulation; the death of the fœtus not unfrequently occurs in the course of a convulsive paroxysm. The fœtus resists the causes of destruction more certainly in the earlier than in later months when it is nearer to its perfect state.

5. The best treatment of these cases is full general depletion.

6. Neither paleness of countenance, smallness of the pulse, nor the presence of albumen in the urine, are contra-indications of depletion.

7. Albuminuria is more frequently met with in pregnancy than in any other physiological state.

8. Without denying the possibility of nephritis in a pregnant woman, the presence of albumen in the urine must generally be regarded merely as a functional derangement. This is confirmed by the results of autopsies.

9. This albuminuria cannot be regarded as the cause of the convulsion, since the latter has often preceded the former.

ACADEMY OF SCIENCES, PARIS.

July 29, 1851.

The Pancreatic Secretion of the Horse, Pig, and Sheep.

M. COLIN, Professor of Anatomy and Phy-

siology in the Veterinary School at Alfort, communicated the following results of his researches, which had for their object to ascertain whether the pancreatic secretion offered the same characters as in other ruminants:—*e. g.* In the horse the pancreatic secretion appears to be hardly so abundant as in the cow and bull. In the pig the secretion only amounts in quantity to about one-fifth of that of the horse. In the sheep the secretion is thick and very rich in albumen, readily forming an emulsion with fatty matters. The quantity of secretion is not always in proportion to the height of the animal or the size of its pancreas. The secretion presents certain peculiarities in its properties in each animal that has been examined.

Muscular Irritability in Cerebral and Spinal Paralysis.

DR. MARSHALL HALL transmitted a note on a case of paralysis, and which contained the following conclusions:—

1. There are cases of paralysis in which the muscles of the affected limb contract from a smaller degree of galvanic stimulus than is required to stimulate the sound member.

2. And, on the contrary, there are cases where the muscles of the sound limb are more readily affected than those of the paralysed side.

3. In cases of paralysis, the influence of the brain or spinal cord is respectively interrupted.

4. Within certain limits, the removal of the cerebral augments the spinal influence, and conversely.

5. This difference in the degree of muscular irritability becomes diagnostic, more certainly than the stronger rapid current.

The functions of the Liver in digestion, and the uses of the Bile in the digestion of Albumen.

M. SEMAISONS, of Lyons, transmitted a work which presented the following conclusions:—

1. Digestion, properly so called, *i. e.*, abstraction being made of the processes resulting from the combination of the alimentary materials, consists of two principal terms, which are:—*a.* Intestinal, or nutritive digestion; *b.* hepatic, or secretory digestion. M. Semaïson's work was engaged with the discussion of the latter.

2. The preparation of the albuminous matters conveyed in the portal veins takes place in the substance of the liver by mixture with the bile that they there meet with.

3. Digestive absorption of the albuminous matters is effected in the liver by the agency of the hepatic lymphatic vessels.

4. It follows, therefore, that the liver must be regarded as the organ of the digestion of

albuminous substances, and that the bile is consequently the principal solvent of the albumen.

Hospital and Infirmary Reports.

ST. GEORGE'S HOSPITAL.

REPORTED BY DR. BARCLAY,
Medical Registrar.

Severe Lesions of the Brain.

No class of cases offers so many points of deep interest, none are so obscure in their diagnosis, and none so perplexing to the practitioner as well as alarming to the friends, as those in which mental consciousness and voluntary powers are obscured, annihilated, or perverted; and so many difficulties lie in the way of coming to right conclusions, that the subject is apt to be thrown aside as incomprehensible; and what the lancet, the employment of blisters and purgatives, and the good help of nature, or a strong constitution, cannot do, is regarded as of the decrees of fate—inevitable and unalterable, the inquiry into which will not repay the trouble of making it. Much has of late years been done towards the attainment of more sound and practical views of treatment; but, until diagnosis be more perfect, treatment must also be necessarily at fault.

It is my intention, in offering a series of cases of this nature which have passed under observation at St. George's Hospital, rather to place on record the facts which have been preserved than to enter into speculations on the relation between the symptoms and post-mortem appearances; and, without attempting to give complete illustrations of the course and symptoms of lesions of the brain, the more remarkable and interesting, and those which seem to have a special bearing on the pathology of the nervous system, will for the most part be selected.

The first case is, in many respects, such as attends the imperfect nutrition dependent upon disease of the coats of the arteries, and, in all probability, due to the same secondary cause of obstructed circulation; but here the primary cause, that on which the obstruction depended, is totally different, and just as rare as the other is common. Here the arteries are occluded, not by disease of their coats, but by a deposit of fibrine within their calibre. Whatever may have been the cause of this abnormal state, its firm union in many

parts with the lining membrane seems to point to an inflammatory origin, but its general character approximated most to the layers formed by coagulation in the sac of an aneurism. There can be no doubt, however, that the condition of brain was its consequence, and not its cause. In the history there is no period of inflammation which had preceded the softening, and to which any inflammatory condition of the arterial coats might have been ascribed; while, on the other hand, the condition of softening is by no means a rare one, and yet is not found in other cases to have given rise to this deposit within the vessels; and moreover, arterial obstruction of another sort is not unfrequently observed along with a similar condition of brain, and is not improperly regarded as its cause.

The extent of voluntary power, and the condition of consciousness, were more like those resulting from certain forms of apoplectic seizure than those of ramollissement; but its incursion, so far as could be ascertained, had not been sudden, nor had there been at any time loss of sensation; and the progressive nature of the case soon cleared up any doubt there might have been originally about the diagnosis.

Richard C—, æt. 45, admitted into St. George's Hospital, under the care of Dr. Bence Jones, 30th Oct. 1850. Reported to have been previously in the enjoyment of good health. He was a man of rather stout figure and good build. He had suffered from toothache, for which two teeth were drawn on the 19th; and, as was alleged, the paralysis had been coming on from that time; but it did not appear that any unusual circumstances had attended the extraction, and he had had no fit or loss of consciousness. On admission, he was quite unable to move either arm or leg; the face was drawn to the left side, and the tongue, which was rather coated, was protruded to the right. There appeared to be no loss of sensation anywhere on the affected side, and he was quite conscious and intelligent, but unable to articulate. In his attempts to speak, he uttered sounds more or less like words, but they seemed to form no part of the words he wished to employ. The pulse was quiet; the heart's sounds seemed natural, and no albumen was detected in the urine. He was directed to have a purgative at night, followed by an enema if necessary, and to have a blister applied to the nape of the neck. His natural functions seemed to be all properly performed; he slept pretty well, his appetite was good, and his bowels were regulated when necessary, by decoction of aloes; and, so far as could be made out, he did not suffer any pain. The

pupils were rather dilated, but contracted with sufficient readiness with the stimulus of light, and there was no strabismus.

He appeared for some days to improve in his power of articulation, but he did not gain power in the arm or leg. He then began to complain of pain in the head; he became more stupid, his aspect more dull, and he was reported to have been a little delirious. A second blister was applied to the neck on the 19th Nov., which he was very obstinate in attempting to tear off; but he became a little more intelligent after its removal. It rose well, and was kept open by green dressing. During the early part of December, he seemed to be again slowly recovering power over the paralysed muscles, but the speech continued very unintelligible. He was at this time quite conscious and intelligent, and, so far as could be made out, was not suffering from headache. The power most manifestly increased in the leg, and less distinctly in the hand. The pulse was 84, and of better strength; the appetite continued good, and the bowels acted regularly.

Again he relapsed, becoming more powerless and less intelligent; was childish in manner, varying between laughing and crying, and passing his motions and urine under him, which he had not previously done since his admission. He was taking Liq. Potassæ three times a day, to which ten minims of tincture of cantharides were added on the 26th December, and the vinegar of cantharides was directed to be applied to the back of the neck, producing a considerable vesication, and having the effect of restoring him to a certain extent. He ceased to pass his motions unconsciously, he had a greater appearance of intelligence, and his speech was rather improved.

On the 6th of January strychnine was given in doses of 1-16th of a grain, at first three times a day, then every six hours, and latterly every four hours. No startings or twitching of the muscle followed its employment throughout. He continued for some time to improve while it was being administered; he was more intelligent, and had more power of both arm and leg, and it was even thought that his speech was more intelligible: but the improvement was very transitory. By the middle of the month he was again passing his motions unconsciously in bed; his aspect became heavier, and his face more dull and inexpressive; his mind was evidently feebler, and his attempts at articulation more unintelligible than ever, until he gradually sank into a stupid and semicomatose state, in which he was seized, on the evening of the 7th February, with con-

vulsions, which recurred three or four times during the night, lasting from ten to twenty minutes each time, and affecting especially the paralysed limbs, leaving considerable rigidity of the muscles of the right arm next day. He had no return of the convulsions; the breathing became very much oppressed, the ribs appearing not to act at all in inspiration, which was entirely diaphragmatic; the face was dusky, the pupils contracted, and there was marked strabismus; the pulse became scarcely perceptible. He sank into complete coma, and died on the morning of the 10th.

Post-mortem examination 34 hours after death.—Body well-formed and in tolerable condition.

Cranium.—The bones of the skull were quite healthy, and so, too, was the dura mater; a small quantity of fluid was found in the subarachnoid tissues, and the large veins on the surface of the brain were distended with blood. On slicing the brain, the white substance of both hemispheres was found to be remarkably vascular, the puncta of blood being much more numerous and much larger than natural, but the grey matter was very slightly affected. In the neighbourhood of the lateral ventricles the white matter assumed a pinkish colour throughout; and in the left hemisphere it gradually became soft, and, at last, quite diffuent, both over the ventricle and beneath it, breaking up when placed under a slight stream of water. These appearances existed in the greater part of the left hemisphere, but the right one was only increased in vascularity. The cerebellum was not affected, neither was the pons. The membranes at the base were merely increased in vascularity. A careful examination of the arteries at the base proved that these vessels were extensively filled with coagula of blood of long standing, which were, for the most part, colourless, and adherent to the internal membrane of the vessel—so adherent in some places that they were with difficulty separated. In general, these coagula merely lined the artery, leaving a channel in its centre, through which the circulation had been carried on. And here the disease presented, at first sight, very much the appearance of a thickening of the coats of the arteries from atheromatous deposit. These coagula, partially occluding the arteries, were found in the basilar, and in both posterior cerebral, as well as in the right carotid, the canal of which, at the anterior clinoid process, was reduced to one-third of its natural size. On laying open this vessel in its course through the skull, it was found that the coagula existed only in the neighbourhood of the cavernous sinus: in the other parts this vessel

was healthy. On the left side the carotid was much more extensively affected; thick coagula lining the inner membrane were found just at the entrance of the artery into its canal; and, on tracing the vessel upwards, these coagula increased in thickness so much that, at the cavernous sinus, and above this point, the vessel was all but blocked up; there being only a canal left scarcely large enough to admit a small bristle. These coagula extended into the anterior and middle cerebral arteries—at least, into the commencement of these vessels. Some milky fluid was found in the lateral ventricles. The carotids were traced up into the neck, and some very thin and slender coagula were found in them, but this only in the neighbourhood of the skull. The coats of the vessels were perfectly healthy.

Thorax.—The muscular tissue of the heart was healthy. A few spots of athroma were found both on the mitral valve and in the aorta, and some small fibrinous deposit of long standing existed on the surface of the mitral valve. With these exceptions, the organs contained in this cavity were healthy.

Abdomen.—The organs in this cavity presented nothing remarkable.

Correspondence.

ON THE SIGNS OF DEFLORATION IN YOUNG FEMALES.

SIR,—The daily papers, some few weeks since, were much occupied by notices of proceedings against the Master of St. Pancras Workhouse, who had been charged with having violated the person of a girl 16 years of age, an inmate of the workhouse of which he was Master. There were many circumstances connected with the charge which sanctioned the opinion that it was groundless; but public, as well as magisterial opinion, was doubtless much influenced by the statement of the medical man, to the effect that “the girl had been feloniously assaulted by some one;” and that, “having made an examination, by order of the directors of the poor, he found symptoms to show that an offence had been committed.” Such a statement by a professional man could not but have great weight against the accused: the result was that the Master was committed by the Police Magistrate to take his trial at the sessions. The imbecility of the girl, however, and the contradictory nature of much of the evidence, were so evident, that the counsel who had pressed for committal, on afterwards reconsidering the charac-

ter of the evidence, advised an abandonment of the prosecution by the parochial authorities. The Poor-law Board have called upon the directors of the poor of St. Pancras for an explanation of their proceedings, with the view of putting them in possession of all the facts and circumstances of the case, that they might ascertain wherein the charge originated, upon what view it was taken up, and, to a certain extent, carried forward, by the governors and directors, and why it was ultimately abandoned by them.

In the meantime, the following extract from the Morning Herald seems to confirm the justice of the abandonment of the prosecution. The girl who was alleged to have been assaulted, recently died in St. Pancras Workhouse, when the following medical evidence was given touching the cause of death:—

“Mr. H. C. Robinson, surgeon to the St. Pancras Workhouse, had attended deceased medically from the latter part of February till her death. She was admitted to the infirmary on the 4th of March, labouring under gastric irritation and fever. She remained till the 28th of March. She then left, but returned, in consequence of having an epileptic fit, on the 2d of April. She was not treated at any time for any violence she had sustained. Under the treatment she received she got better. Believed her age was about 16. She was rather a dull girl. About two months back the first symptoms of cough and chest disease set in, and she then had tubercular disease of the lungs. She never was treated for any real or supposed violence; nor was there anything which he could, as a medical practitioner, detect to show that she was labouring under the effects of violence.

“Dr. Quain deposed that he had made a post-mortem examination of the body. In the head there was a slight congestion of the vessels. In the chest there was great disease of the right lung, and the left less so; the cavities were filled with tubercles, and the disease was consumption in its true character. Examined the abdomen, and found all the organs in a healthy state. Examined all the generative organs most minutely, and could find no traces of violence whatever. She had never been pregnant. The cause of death was pulmonary consumption, a disease of the lungs. He could not in any way connect her death with any sign or symptom of violence.

“The Jury ultimately returned a verdict, ‘That Eliza Smith died from pulmonary consumption; and that her death was not caused by violence, as had been suspected.’”

Now, upon the facts stated, the writer would beg permission to suggest that it appears strange, and irreconcilable with the present state of forensic medicine, that there should be any doubt or difficulty in determining, in a supposed recent case of violation of a young girl, whether or not the crime, or rather *the act*, has been effected?

Most medical jurists have laid down the signs by which defloration may be detected; and, even were it not so, the anatomist, one would suppose, could scarcely be deceived on the point. The surgeon who has occasionally examined the external organs of generation in young females would hardly hesitate in deciding whether the sexual organs of a young girl of sixteen years of age presented signs or no signs of recent violence. In elder women of debilitated or diseased constitution, local disease might seem to simulate violation; but the genitals of a girl of tender age could scarcely offer much difficulty to the solution of the question. At least such it appears to me, who am a mere inquirer into the history of this case. As a student of medical jurisprudence, I should be glad if any of your readers would state, through your paper, whether in their experience they have encountered difficulty in answering the question when relating to so young a female.

The case above referred to appears to me to serve—unfortunately like many others—to show either that there are wanting the sure evidences of defloration, or that medical evidence is particularly loosely given with regard to the signs of virginity. I have turned to the authorities that I have at hand, seeking information with reference to the first supposition, in order to determine whether, in the opinion of writers on medical jurisprudence, any doubt exists upon the extent of inferences warranted as to the perpetration of an act of violence, from the condition of the organs of generation. A few of these are here quoted. Dr. Taylor thus expresses himself:—*

“A medical jurist, when consulted in such a case, can only be guided by the presence or absence of the external signs of virginity. The hymen may be intact; but this does not prove non-intercourse, because females have been known to conceive with the hymen uninjured, and an operation for a division of this membrane has been actually necessary before delivery could take place. This may be explained by the membrane being hard and resisting, and at the same time small in extent,—*i. e.* only partially closing the vagina. Under

opposite conditions, the persistence of this membrane might fairly lead to the inference that there had been no intercourse.”

Dr. Beck, after reviewing various opinions on the condition of the external organs in females, observes:—“These observations certainly lead us to doubt whether the presence or absence of the hymen deserves much attention; and I believe the opinion of physiologists generally is, that it is an extremely equivocal sign. I am, however, unwilling to go so far as most of the later writers on legal medicine, who virtually reject it altogether. While it must be allowed that it can be destroyed by causes which do not impair the chastity of the female, we are justified, I think, in attaching considerable importance to its presence. It would be difficult to support an accusation of rape where the hymen is found entire.”*

Dr. Blundell remarks,—“What is the use of this mystic membrane, the hymen? and I am not sure that we are yet even able to give an answer to the inquiry. It has often been asserted, that it is a sort of guard of virginity, and a test of its reality, and there may be some truth in this; but after all, I am of Matthew Prior’s opinion, that you should put the padlock on the mind, and that the hymen alone is but a poor protection to maidenhood—a frail outwork of little avail, if the citadel within is treacherous and unfaithful.”†

Mr. Erasmus Wilson states that, “the vagina is closed in the virgin by a membrane of a semilunar form, which is stretched across the opening; this is the hymen.” The same author, however, subsequently observes, that “The hymen must not be considered a necessary accompaniment to virginity, for its existence is very uncertain.”‡

Dr. Burns says,—“In children, the orifice is always shut up by a membrane, called the hymen, which consists of four angular duplicatures of the membrane of the vagina, the union of which may be discovered by corresponding lines on the hymen.”§

From the preceding quotations, and the statements of other authors who might have been quoted, and from the results of one’s own examination of infants and children, it may be concluded that the hymen exists in childhood, whatever may be the degree of uncertainty attaching to its presence in after-life. Such, then, being the

* Beck’s Elements, 3d. edit. p. 50.

† Principles and Practice of Obstetricy. London, 1834. p. 30.

‡ The Anatomist’s Vade Mecum. Second Edition, p. 561.

§ Principles of Midwifery. Eighth Edition, p. 44.

* Taylor’s Medical Jurisprudence, 3d edit. p. 636.

fact, the marks of defloration in young subjects cannot be so difficult of recognition as the frequently contradictory character of medical evidence would lead one to infer. These signs must necessarily be the more obvious according as the examination is made sooner or later after the alleged act of violence, and will also, one may conclude, be unmistakeable where the commission has been the first act of connection on the part of the female, as it ordinarily will be if the girl be of tender years. In a child sixteen years of age, there would probably be found the lacerated or ruptured edge of the hymen, great tenderness to touch, heat of the parts, and difficulty in walking. In the case above mentioned, the surgeon stated it as the result of his examination, "that the girl had been feloniously assaulted by some one, and that he found symptoms to show that an offence had been committed." And yet on examination of the body of this same girl, who died about two months afterwards, we are informed that the same gentleman stated on the inquest, that there was nothing which, "as a medical practitioner, he could detect to show that she was labouring under the effects of violence." Dr. Quain "examined all the generative organs most minutely, and could find no trace of violence whatever."

Here, then, either the opinion of the medical officer had been wrongly reported, or else, that opinion was given somewhat loosely. For the sake, then, of medical science it is hoped that Mr. Robinson will favour your readers with the grounds of his first opinion, and the reasons for his subsequent statement to the contrary effect; if his evidence has been correctly reported in the daily journals.—I am, sir,

Your obedient servant,

A STUDENT OF FORENSIC MEDICINE.

July 28th, 1851.

Medical Intelligence.

MEDICAL STATISTICS OF THE POPULATION OF THE BOROUGH OF PLYMOUTH. BY DR. WM. HAMILTON.

ACCORDING to official returns, the population of Plymouth on the 31st of March was 49,673, exclusive of 1,014 on board of vessels within the limits of the borough. Adding to the former number 136 for the increase since, we have for the aggregate population ashore on the 30th of June, 49,809, from which, if we subtract the number enumerated on the 30th of June, 1841—viz., 36,527—we shall have for the decennial increase 13,282, or at the mean rate of 1,328 annually. As, however, it

would be impossible to correct the numbers for 1850 in a satisfactory manner, so as to admit of a fair comparison with the present, we shall, for the remainder of 1851, confine ourselves to giving the results of the late census increased by the excess of births. At the annual rate of increase shown by the official returns, the aggregate population for the ten years was somewhere about 438,321, giving a mean population of 43,822. The aggregate mortality during the same period, including the 819 deaths from cholera in 1849, was 11,209, or at the mean rate of 1,122—or, 2.556 per cent. of the mean population,—a mortality less, we believe, than that of Liverpool by at least one-half per cent. But as cholera was an addition to the normal mortality of the borough, which does not appear to have been in any respect materially modified by its presence, the mortality resulting from it ought, in estimating the normal mortality under ordinary circumstances, in common fairness, to be rejected from our calculation; in which case the normal mortality will be found to have been only 10,390, or 1.039 annually, reducing the centesimal proportion to 2.372, or about $2\frac{1}{4}$,—a mortality hardly greater, if, indeed, equal to that of most towns of its size and population throughout the kingdom—Liverpool perhaps excepted, in which the mortality is centesimally greater. But the mortality of Plymouth is raised above its legitimate level by extraneous causes which we have no existing means of computing. These abnormal causes are—1st. The mortality among patients from the rural districts of South Devon and Cornwall, in the hospital, and of numerous strangers from all parts of the world, who close their existence here without having been enumerated among our population. Were it possible to apply the requisite corrections for these two sources of error, we feel confident it would reduce the centesimal proportion of our legitimate mortality to at the most 2 per cent., if not under it,—a mortality which may fairly challenge comparison with that of most, if not all, the large towns of England, with the exception, perhaps, of Exeter, where, from the improved sanitary measures adopted since 1832, the mortality is, we believe, considerably below the usual average. Until we have had an opportunity of analyzing the Registrars' usual annual returns, we cannot enter farther into the question of mortality, and must therefore defer farther observations till after the expiration of the current quarter. We have been induced to say thus much in vindication of the salubrity of our town from the ungenerous advantage which has been taken by some individuals but loosely connected with the borough, of a somewhat

hasty and unguarded expression, in a recent quarterly report of the Registrar-General, deduced from imperfect data, to depreciate our sanitary condition, and decry the honourable exertions of our municipal authorities. We are far from asserting that our sanitary condition is what we could wish; but improvement is the growth of time, and we challenge those who have, like ourselves, known Plymouth for the best part of half a century, to deny that the Plymouth of 1801 will bear no manner of comparison with the Plymouth of 1851.

* * * From a summary published in our last number, it will be perceived that the annual rate of mortality for England in the Spring quarter is, on an average, 2.141 per cent. of the population.

THE CHOLERA IN THE WEST INDIA ISLANDS.

By the latest intelligence from Jamaica, dated July 17th, we are informed that the cholera was still prevalent in the parishes of Hanover and Westmoreland, whence the accounts are most distressing. The medical practitioners were exerting themselves to stay the plague, but as yet their efforts had not proved successful. The pestilence had also broken out among the military stationed at Up Park Camp, and several of the soldiers had died. Every precaution had been taken to prevent communication between the citizens of Kingston and the inhabitants of the adjacent districts with the soldiers' encampments. Tents had been pitched, and the affected soldiers placed within them, and every other caution taken to prevent, as much as possible, the spread of the disease. Great fears were entertained of its reappearance in Kingston.

The health of Kingston was not satisfactory, the influenza being very prevalent, attended with fever and pains in the head. Several persons had died from its effects; among them the Rev. Mr. Dawson, rector of St. John.

The weather was rather hot and dry, and very strong sea breezes prevailed.

The *Kingston Morning Journal* has the subjoined account of the progress of the cholera:—

"The Northside papers brought by Saturday's post announce the continuance of the ravages of cholera in Savanna-la-Mar and the parish of Westmoreland, as also in Green Island and Hanover. In Westmoreland the disease has attacked with equal virulence and irresistible fatality persons of all classes. Up to Saturday, the 5th, there had been buried from Savannah-la-Mar, in the cholera-ground, 115; from Dunbar's River and the neighbourhood, 45; and on Sunday night there were 6 burials; making a total of 166: besides which, two new cases were reported on Sunday, and two on Monday, and the hospitals were

full. Mr. Davidson, the assiduous superintendent of the hospital, is among the victims. Dr. Mason and Dr. Adolphus are unceasing in their attendance in Savanna-la-Mar, the latter gentleman having recovered from an attack of the malady. Dr. Sunderland, from St. Elizabeth's, is actively engaged on Petersfield, Carawina, and Ferris's Estates, on the last of which the disease has committed great havoc. Dr. Murphy is said to be combating the disease very successfully in the leeward district of the parish, as is also Dr. Parkin in the Morgan's-bridge and Glasgow district. Dr. Potts, who also, according to the *Cornwall Chronicle*, has been very useful in saving the lives of many, is reported to be about returning to Lucia."

The *Daily Advertiser* contains the appended paragraph respecting the district of Westmoreland:—

"Our news is still more painful than heretofore, the disease being on the increase, and our obituary announcing the death of several persons of respectability who have fallen victims to its potency. Our correspondent, under date July 12, writes,—'The deaths to date in this town (Savanna-la-Mar) are 224. The disease is, I think, assuming a much more malignant form within the last week, and there are at the present moment seventeen corpses lying in the ground unburied. The weather has been very bad indeed for the last three days.' The above, which we copy from the *County Union*, is fully confirmed by private advices received yesterday from Savanna-la-Mar. The latest accounts show that twenty-one corpses were lying uninterred, there being no graves dug to receive them. We learn, further, that there had not been more than six recoveries."

In the *Colonial Standard* we read:—

"Accounts from Manchioneal announce the reappearance of cholera in that district of St. Thomas in the East. The cases, however, appear to have been principally, if not exclusively, among persons who have fled from the Plain-tain-Garden River district on the reappearance of cholera there. One of these was the case of a man who had been working at Golden Grove, and died at Windsor Forest the morning after he arrived there from the former property. There had been several deaths on the River Estates; and as the Manchioneal people, who had been attracted to the River district by the high wages offered there, were hastening back to avoid the cholera, there seems every probability of Manchioneal being once more extensively affected with the disease."

THE ENGLISH HOMŒOPATHIC ASSOCIATION.

THE advocates of infinitesimal doses are reported by the daily journals to have held

what they call an annual meeting, on the 12th inst., at the Freemason's Tavern, Great Queen Street. The chair was taken by a Sir John Kennaway, in the absence of Lord Robert Grosvenor. Although the Times has devoted nearly a column to a report of the proceedings, to the exclusion of useful and profitable matter, we should have some difficulty in assigning any other object to the meeting than that of advertising the members of the so called association. The speakers displayed the usual amount of credulity and ignorance, and the affair was very appropriately wound up by a "Poem" in honour of homœopathy, sung by Dr. Epps.

ADMISSION OF FELLOWS AT THE ROYAL COLLEGE OF SURGEONS.

The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at the meeting of the Court of Examiners on the 8th inst.:—Messrs. John Bredin Posnett, Belfast—Maurice James O'Connor, Morpeth, Northumberland—Cornelius William Dennehy, Cork—Walter Alexis Bridge, Nicaragua, Central America—Henry George, Kirton Lindsey, Lincolnshire—James Dickson, Charleston, South America—Henry Spry Leverton, Truro, Cornwall—John Ansell Brown, Surrey Square, Old Kent Road—and Charles Rothwell, Bolton-le-Moors, Lancashire. At the same meeting of the Court Mr. Robert Charles Seott passed his examination for naval surgeon. This gentleman had previously been admitted a member of the College, his diploma bearing date August 9th, 1847.

At a meeting of the Council on the 7th inst. Messrs. Peter Redfern, of Aberdeen, diploma dated August 18th, 1843, and Edward Smith, of St. John's-wood, formerly of Birmingham (May 10th, 1841), were admitted Fellows of the College.

OBITUARY.

SURGEON THOS. ROBERTSON, R.N.

THIS officer, the oldest on the retired list of surgeons, with two exceptions, died at Islington, on Saturday last, the 9th inst. He entered the service as an assistant-surgeon on June 20, 1794, and served in that rank and as surgeon of the Europa and Flying Fish at the capture of Port-au-Prince in 1794; and in the Dædalus, at the attack on Goree. While in the Leopard he had the charge of the hospital at Mocha, and served in the Sirius in Calder's action. He was also present in her at the battle of Trafalgar; and in her action with the French flotilla off the Tiber; and was surgeon of the Norge at the defence of Cadiz. He was the principal founder of

the Seamen's Hospital Ship in the River Thames.

EDWARD PILKINGTON, ESQ.

ON the 28th ult., at the Manor-house, Ruthin, Edward Pilkington, Esq., Staff Surgeon of the First Class, aged 67.

RICHARD WRIGHT, ESQ.

On the 1st inst., Richard Wright, Esq., surgeon, Rotherhithe, aged 79.

BIRTHS & DEATHS IN THE METROPOLIS During the Week ending Saturday, Aug. 9.

| BIRTHS. | DEATHS. |
|---------------|---------------|
| Males.... 749 | Males.... 536 |
| Females.. 728 | Females.. 502 |
| 1477 | 1038 |

CAUSES OF DEATH.

| | |
|--|------|
| ALL CAUSES | 1038 |
| SPECIFIED CAUSES | 1038 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 334 |
| Sporadic Diseases, viz.— | |
| 1. Dropsy, Cancer, &c. | 52 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 119 |
| 4. Heart and Bloodvessels..... | 42 |
| 5. Lungs and organs of Respiration | 79 |
| 6. Stomach, Liver, &c. | 61 |
| 7. Diseases of the Kidneys, &c. | 10 |
| 8. Childbirth, Diseases of Uterus, &c. | 7 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 6 |
| 10. Skin..... | |
| 11. Premature Birth | |
| 12. Old Age | 45 |
| 13. Sudden Deaths..... | 9 |
| 14. Violence, Privation, Cold, &c.... | 23 |

The following is a selection of the numbers of Deaths from the most important special causes:

| | | | |
|--------------------|-----|------------------|-----|
| Small-pox..... | 22 | Convulsions..... | 46 |
| Measles..... | 19 | Bronchitis | 28 |
| Scarlatina | 25 | Pneumonia | 40 |
| Hooping-cough | 28 | Phthisis | 141 |
| Diarrhœa..... | 136 | Lungs | 6 |
| Cholera..... | 16 | Teething | 9 |
| Typhus..... | 50 | Stomach | 5 |
| Dropsy | 18 | Liver..... | 11 |
| Hydrocephalus | 39 | Childbirth | 3 |
| Apoplexy | 28 | Uterus | 1 |
| Paralysis | 13 | | |

The sickness to which young children are subject at this time, it will be seen, has been the cause of the increased mortality during the last three weeks. Thus, of 136 cases of Diarrhœa, 119 were under 15 years of age, as were all the cases of Cholera. The numbers of other infantile diseases are also rather high. In other respects, the present return does not differ materially as regards the gross amount of mortality from the average of corresponding weeks in 1841-50.

METEOROLOGICAL SUMMARY.

| | |
|---|---------------------|
| Mean Height of the Barometer | 29.96 |
| Thermometer ^a | 64.1 |
| Self-registering do. ^b | Max. 85.5 Min. 50.1 |
| ^a From 12 observations daily. | ^b Sun. |
| RAIN, in inches, 0.0. — Sum of the daily observations taken at 9 o'clock. | |

NOTICES TO CORRESPONDENTS.

We have to apologize to Dr. Balman, Mr. Milton, Dr. Geoghegan, Dr. Macgregor, Mr. Kirk, and Dr. Barnes, for the delay in the publication of their papers. They shall appear as early as possible.

Dr. Ogston's concluding paper has been received.

Lectures.

LECTURES

ON

TUMOURS,

Delivered in the Theatre of the Royal College of Surgeons of England.

BY JAMES PAGET,

Professor of Anatomy and Surgery to the College.

LECTURE VIII.

Glandular tumours.—Their occurrence in connection with the mammary, labial, thyroid, and prostate glands—Relation to the Proliferous cysts; from which, perhaps, they always originate—Mammary Glandular (Chronic Mammary) tumours—Their usual seat and relations—chief varieties of apparent structure—microscopic characters—Capricious modes of growth—occasional disappearance—extents of growth—probable nature—Corresponding histories of the Labial and Prostatic Glandular tumours. Vascular or Erectile tumours.—Their frequent existence at birth—Principal varieties: arterial, venous, and capillary—the structure of each, as resembling, and differing from, erectile tissue—Their usual, and less frequent, seats—Relations to cystic and malignant tumours.

WE may call the tumours "glandular" that, in their structure, imitate the glands, whether the secreting glands, or those organs which we name glands, because, though having no open ducts, they are of analogous structure.

The most frequent example of these glandular tumours is the kind which imitates, and occurs in or near, the mammary gland; the chronic mammary tumour of Sir A. Cooper; the pancreatic tumour of Mr. Abernethy;* the fibrous tumour of the breast of M. Cruveilhier.† Other tumours of the same general kind are more rarely found in the lips, and in or near the prostate and the thyroid glands. Probably, too, some other tumours, to which no name, or a wrong one, has been hitherto assigned, may yet have to be placed in this group: indeed, I think it very probable that there are certain lymphatic gland-growths which we usually re-

gard as enlarged glands, but which are really of the nature of tumours, even in the most limited sense of the term. At present, however, I will speak of only such gland-tumours as may be clearly recognized,—namely, the mammary glandular tumour, the labial, and the prostatic. I have already spoken of the thyroid, and of those which may imitate the parotid.

Some of the pathology of these tumours has been already sketched in the account of the glandular proliferous cysts.* To that account I may again refer, so far as to the point at which it is believed that an intra-cystic growth has completely filled the cyst in which its growth began, and has coalesced with the walls, so as to form a solid tumour.

Now, it is, perhaps, probable that all glandular tumours may be formed after this plan: for, in those occurring in the breast, we find sometimes one circumscribed mass composed half of a proliferous cyst, and half of a solid glandular tumour;† sometimes two such growths lie apart, yet in the same gland; and often, we find such structures as we doubt whether to call proliferous cysts nearly filled, or mammary tumours.

However, if all the mammary and other glandular tumours are thus of intra-cystic origin, it must be admitted that many of them must very early lose the cystic form, and continue to grow as solid masses; for we find them solid even when they are very small, and they are traced growing from year to year, yet apparently maintaining always the same texture.

I shall speak now of the solid tumours alone; and, first, of the Mammary Glandular tumours.

Sir Astley Cooper may be said to have had a good insight into their nature, when he called them "chronic mammary," and said they were "as if nature had formed an additional portion of breast, composed of similar lobes."‡ But I believe nothing more than this general likeness had been observed, till these tumours were examined with the microscope by M. Lebert,§ who found in them the minute glandular structure imitative of the mammary gland, and recognized many of their relations to the proliferous cysts. Mr. Birkett,|| by independent and contemporary observations, made on the great collection of these tumours in Guy's Hospital, confirmed and extended the conclusions of M. Lebert, and has cleared up much of the obscurity that existed previous to his inquiries. Both these gentlemen apply such terms as

* Lectures i. and iii.

† Mus. Coll. Surg. 177-178.

‡ On Diseases of the Breast, p. 54.

§ Physiologie Pathologique. t. ii. p. 201.

|| On the Diseases of the Breast, p. 124.

* The mammary tumour described by Mr. Abernethy was probably a medullary cancerous disease.

† Anatomie Pathol., livr. xxvi. pl. 1; and Bulletin de l'Academie de Méd. t. ix. p. 429.

"Imperfect Hypertrophy of the mammary gland" to these tumours: but highly as I esteem their observations (and not the less, I hope, because they corrected errors of my own*), I would rather not adopt their nomenclature, since if we do not call these "tumours," I hardly know to what innocent growths the term could be applied. Nearly all innocent growths are imperfect hypertrophies, in the same sense as these growths are; nay, these are, in many respects, the very types of the diseases to which the name of tumours is by general consent ascribed, and which can be distinguished, even in definition, from what are more commonly regarded as hypertrophies.

The mammary glandular tumours may be found in any part of the breast,—over, or beneath, or within the gland, or at its border. Their most rare seat is beneath the gland; their most common at its upper and inner part, imbedded in, or just beneath, its surface. They are usually loosely connected with the gland, except at their deepest part, where their capsules are generally fastened to the gland; but the connection is of so small extent that they slide very easily under the finger, and are peculiarly moveable in all directions.

The tumour is commonly of oval shape; superficially, or sometimes deeply, lobed or nodular; firm, or nearly hard, elastic, and often feeling like a cyst tensely filled with fluid. The parts around appear quite healthy. The mammary gland is pushed aside; but it undergoes no other change than that of atrophy, even when stretched over a tumour of the largest size. The skin under distension may grow slightly livid, but else is unchanged. The tumour is usually invested with a complete capsule, isolating it from the surrounding mammary gland, and often adhering less to it than to the gland. This capsule may appear only as a layer of fibro-cellular tissue, like that round any other innocent tumour; but it is not unfrequently more perfectly organized in layers, and smoother on its inner surface; conditions that we may perhaps ascribe to its having been a perfect cyst within which the glandular growth originated, and which it only lately filled.

On section, these tumours present a lobed construction, in which it is sometimes not difficult to discern the remains, or the imitation of the plan, of the lobed, and foliated and involuted intra-cystic growths. In some, the fibro-cellular partitions among the lobes

converge towards the centre of the mass, as if they were the remains of clustered cyst-walls; or, there may remain a cavity in the centre of the tumour, as if clustered cysts and growths had not quite filled up the space. In some, however, no such plan is discernible; the whole mass is disorderly lobed, and its lobes have the shapes derived from accidental mutual pressure, and are bounded by loose fibro-cellular partitions.

In structure as in construction, these tumours may present several variations; but they may be artificially arranged in three or four chief groups.

Some are really very like the normal mammary gland in an inactive state. These have a pure opaque-white, and soft, but tough and elastic, tissue; they are lobed and minutely lobulated, with undulating white fibres. Such an one is well shown in a specimen from Sir Astley Cooper's collection,* in which, moreover, his injection of the blood-vessels shows a moderate vascularity, about equal to that of the surrounding normal gland substance.†

We might take such as this as examples of the medium form of this kind of tumour; and the other chief or extreme forms are represented by those which deviate from this in two directions. In one direction we find much softer tumours; these,‡ though closely textured, are soft, brittle, and easily crushed; their cut surfaces shine, or look vitreous or half translucent; they are uniformly greyish-white, or have a slight yellowish or pink hue, which deepens on exposure to the air; or they may look like masses of firm, but flickering, jelly; and commonly we can press from them a thin yellowish fluid, like serum or synovia. Such as these have the usual lobed and lobular plan of construction; and I think the intersecting partitions commonly extend from a firm, fibrous-looking central or deep part, towards the circumference of the tumour.

In the other direction from the assumed average or medium form, we find firmer tumours. These have a drier and tougher texture; they are opaque, milk-white, or yellowish, like masses of dense fibro-cellular tissue, lobed, and having their lobes easily separable, as in this great specimen§ of seven pounds weight.

To such as these varieties we might add many, due not merely to intermediate forms, but to the degrees in which the intra-cystic mode of growth is manifested; or to the development of cysts, which may take

* In the Catalogues of the Museums of the College and of St. Bartholomew's Hospital these tumours are classed with the fibro-cellular. In most of the specimens that I had examined the fibro-cellular tissue was very abundant, and I thought too lightly of the glandular tissue which I found mingled with it.

* Mus. Coll. Surg. No. 2772.

† In this specimen there is also a peculiar warty growth in the skin over the tumour.

‡ Such as No. 2774.

§ Mus. Coll. Surg. 208.

place as well in this new gland-tissue as in the old; or to the various contents of these cysts, whether liquids or organized growths.*

I believe we cannot at present always connect these various aspects of the tumours with any corresponding varieties in their histories. Neither, I think, have any investigations proved more of the corresponding varieties of microscopic structure, than that, as a general rule, but only a general one, the tougher any tumour is, the slower its growth has been, and the more it has of the fibro-cellular, mingled with its glandular, tissue; and that the more succulent and vitreous it is, the less perfectly is the glandular tissue developed, and the more rapid is the growth.

The microscopic structures may be best described from a medium specimen:† from such an one I made these illustrative sketches. The patient was thirty-three years old; the tumour had been noticed seven months, and was ascribed to a blow; it was painful at times and increasing; and it had the several characters that I have already described. The patient has remained well since its removal.

In such a tumour one finds, in thin sections, traces of a minute lobular or acinous form; the miniature, we might say, of that which we see with the naked eye. The lobules may be merely placed side by side, with little or no intervening tissue; their form may appear to depend on the arrangement of their contents, and these may seem scarcely bounded by membrane. But, I think, more commonly, especially in the firmer specimens, the plan of lobules or acini is mapped-out by partitions of filamentous-looking tissue, fasciculi of which, curving and variously combined, appear to arch over, and to bound, each acinus or lobule. Indeed, great varieties appear in the quantity of this tissue; it may be nearly absent, or it may so predominate as to obscure the traces of the essential glandular structure.

This proper gland-structure consists of minute nucleated cells and nuclei, clustered in the lobular form, or in that of cylinders or tubes, and often, or perhaps always in their most natural state, invested with a simple, pellucid, limitary membrane.

Thus, the likeness is striking between

* I believe these include the chief examples of Müller's Cystosarcomata. One of these tumours containing simple cysts would constitute his cystosarcoma simplex: the cysts being proliferous with gland growths would make his cystosarcoma phyllodes.

† The microscopic examinations of several specimens may be found in Lebert (Phys. Patho. ii. 190, e.o.; and Abhandlungen, p. 269, e.o.); Birkett, On Diseases of the Breast, p. 16; and Bennett, On Cancerous and Cancroid Growths, p. 52.

the structure of such a tumour and that of an inactive mammary gland, such as that of a male, as Mr. Birkett has pointed out. We have here what may be compared with the round or oval cæcal terminations of the gland-tubes clustered together, and often seeming grouped about one trunk-tube; and, in these we have the simple membrane and the gland-cells and nuclei within; only the main duct is wanting, and the communication with the ducts of the proper gland. It is as if the proper secreting structure of a gland were formed without connection with an excretory tube; the tumour is, in this respect, like one of the glands without ducts.

The mammary glandular tumours are singularly variable in all the particulars of their life. They sometimes grow quickly; as did the largest figured by Sir A. Cooper, which, in two years, acquired a weight of a pound and a half. In other cases their growth is very slow; here is one* that in four years had not become so much as an inch in diameter. In some instances they remain quite stationary, even for many years. Here is one† which was removed from a woman 27 years old: it was observed for 14 years, and in all that time it scarcely enlarged; yet after this it grew so rapidly that, after six months, it was thought imprudent to delay the removal. Cases of this arrest or extreme retardation of growth must have been seen by most surgeons; but there are few cases so striking as one related by M. Cruveilhier, in which a lady had, for more than 20 years, three of these tumours in one breast, and one in the other. She died of the treatment employed against them, and after death no similar disease was found in any other part.

Equal variations exist in regard to pain. Commonly these tumours are painless; but sometimes they are the seats and sources of intense suffering; even of all that suffering which is popularly ascribed to cancer, but which cancer in its early stages so very rarely presents. The irritable tumour of the breast, as Sir A. Cooper named it, was in most of his cases a mammary glandular tumour;‡ and the character of the pain, like that of the painful subcutaneous tumour, is such as we may name neuralgic.

I have here an example of a tumour§ evidently glandular, which was taken from the breast of a woman 25 years old, where it had been growing for two years, and had

* Museum St. Bartholomew, Ser. 34, No. 23.

† Mus. Coll. Surg., 207 B.

‡ Under the same name, however, he included some that were more probably "Painful subcutaneous Tubercles;" see his pl. viii. figs. 2, 4, 5, 7.

§ Mus. St. Bartholomew's Hospital, Ser. 34, No. 22.

often been the seat of the most intense pain. I referred to a similar case in the fourth lecture, while speaking of neuralgic tumours; and quite lately I removed a similar tumour from the breast of a young lady, who begged for its removal only that she might be relieved from severe suffering. In all these cases the minute glandular structure was well marked.

A peculiarity of these tumours is, that they not unfrequently disappear; an event hardly paralleled in any other tumour. They are most likely to do this in cases in which any imperfection of the uterine or ovarian functions, in which they may have seemed to have their origin, is repaired by marriage, or pregnancy, or lactation. And the fact is very suggestive: since, in many cases, it appears as if the discontinuous hypertrophy, which constitutes the tumour, were remedied by the supervention of a continuous hypertrophy for the discharge of increased functions of the gland.

On the other side, these tumours often continue to grow indefinitely, and they may thus attain an enormous size. One was removed by Mr. Stanley seven years ago, which, after twelve years' progress, in a middle-aged woman, measured nearly twelve inches in length and weighed seven pounds. It was pendulous; and, as she sat, she used to rest it on her knee, till the integuments began to slough. Mr. Stanley merely sliced it off, cutting through the pedicle of skin; and the patient remains to this time well. The tumour is one of the firmest and most filamentous of the kind.*

Here also is a tumour† of the same kind, but softer, and much more succulent, which was removed by Mr. Liston from a woman 44 years old, and which weighed twelve pounds.

Respecting the origin of these tumours, little more, I believe, can be said than that, occurring most commonly in young unmarried or barren women, their beginning often seems connected with defective or disordered menstruation. The law which, if we may so speak, binds together in sympathy of nutrition the ovary and the mammary glands, the law according to which they concur in their development and action, is not broken by one with impunity to the other. The imperfect office of the ovary is apt to be associated with erroneous nutrition in the mammary gland.‡

* Mus. Coll. Surg., 208.

† Mus. Coll. Surg., 216.

‡ Since the lectures were delivered, I have seen the only specimen with which I am acquainted, of a mammary glandular tumour in a male. A portion of it was sent to me by Mr. Sympton of Lincoln, and its characters were well marked. It was removed, by Mr. Hadwen, from a countryman, twenty-five years old, in

There are, I believe, no facts to suggest that the glandular tumours are other than innocent. Several may grow in the same breast at the same or successive times; but I have not known of more than three either at once or in succession. In no case, I believe, has a malignant course been observed in such a tumour; nor am I aware of any facts which prove what is commonly believed, that, after a time, these tumours may become cancerous. Of course such things may happen; and, on the whole, one might expect, that if a woman have a tumour of this kind in her breast, cancer would be more apt to affect it as a morbid piece of gland, than to affect the healthy gland. But, I repeat, I know no facts to support this; and such as I have met with are against it. Thus, I have here a portion of breast* from a woman 42 years old, in which there lie, far apart, a small mammary glandular tumour that had existed four years, and a hard cancer that had existed four months.† And a second specimen‡ shows a hard cancer and a proliferous cyst, in the breast of a patient, who died some time after its removal, with recurrence of the cancer. In these cases, at least, the tumour was not selected as the seat for cancer; and I believe that these cases are not counterbalanced by any of an opposite kind.

LABIAL GLANDULAR TUMOURS may be briefly described, for their general characters correspond closely with those of the foregoing kind; or, they may appear intermediate in character between the foregoing and those tumours which I described as lying over or near the parotid gland, and as consisting of mixed glandular and cartilaginous tissue. Their likeness to these tumours over the parotid was manifest to Mr. Lawrence, who has added to his account of the tumours by the parotid, the only case of labial glandular tumour that I have found on record.§

The most marked case of labial gland-tumour that I have seen was that of a healthy-looking man lately under the care of Mr. Lloyd. A tumour had been growing in his upper lip for 12 years. It was not painful,

whom it had been growing irregularly, and occasionally diminishing or disappearing, for about five years. When removed, it formed a circular, flattened, and slightly lobulated tumour, 3½ inches in diameter, and an inch in thickness, invested with a distinct fibro-cellular capsule, which loosely connected it to the adjacent tissues.

* Mus. St. Bartholomew's, Ser. 34, No. 17.

† Since the lectures were delivered, Mr. Stanley has removed a breast similarly diseased; a small hard cancer existing in one part, and a glandular tumour in another.

‡ Mus. St. Bartholomew's Hospital, Ser. 34, 16,

§ Medico-Chirurgical Transactions, Vol. xvii. p. 28.

but the protrusion of the lip was inconvenient and ugly, the swelling being an inch in diameter. It was imbedded in the very substance of the lip, both the skin and mucous membrane being tensely stretched over it. Its form was nearly hemispherical, its posterior surface being flattened as it lay close on the gums and teeth, its anterior convex and smooth. Its whole substance was firm, tense, and elastic. Mr. Lloyd removed the tumour with the mucous membrane over it, leaving the skin entire. The tumour was firm, slightly lobed, yellowish-white, smooth. In general aspect it resembled the mixed tumours over the parotid, but in minute structure it presented as perfect an imitation of lobulated or acinous gland-structure, as any mammary glandular tumour I have yet seen. Its lobules and tubules were invested with distinct limitary membrane; and they were filled with nuclei and nucleated cells, like those of the labial glands.*

In another case, I removed a similar tumour from the upper lip of a man about 30 years old. It had been regularly growing for four years without pain, and projected far externally, reaching to the same distance as the end of his nose. This had a texture of glandular kind, but less distinctly marked than that in the former case. Moreover, in the centre of the mass was a portion of bone; a peculiarity which existed also in Mr. Lawrence's case, and which may add to the probability of relationship between these tumours and the mixed glandular and cartilaginous tumours over the parotid.

Lastly, I may again refer to a specimen in the Museum of St. George's Hospital, in which, in one tumour, a cyst and what looks like one of these glandular growths are combined.

PROSTATIC GLANDULAR TUMOURS were briefly referred to in the first lecture, as examples of the abnormal growths by which tumours appear to be connected with simple hypertrophies of organs; and I can add little to what was then said of them.

We owe to Rokitsansky† the knowledge, that the tumours in the prostate gland, which were commonly, and till lately even by himself, regarded as fibrous tumours, are composed of tissues like those of the prostate gland. In enlarged prostates they are not unfrequently found. In cutting through the gland, one may see, amidst its generally lobed structure, portions which are invested and isolated by fibro-cellular tissue, and may be enucleated. Such por-

tions have, I believe, been sometimes removed as tumours, or as portions of prostate-gland, in operations of lithotomy. They lie imbedded in the enlarged prostate, as sometimes mammary glandular tumours lie isolated in a generally enlarged breast. They look like the less fasciculate of the fibrous tumours of the uterus; but, to microscopic examination, they present such an imitation of the proper structure of the prostate itself, that we cannot distinguish the gland-cells or the smooth muscular fibres of the tumour from those of the adjacent portions of the gland. Only their several modes of arrangement may be distinctive.

At present the examinations of these tumours have been too few to furnish a complete history of them: neither can I add any cases or references to specimens to those which were adduced in the first lecture. Indeed, at present, the chief or nearly the whole interest of these tumours lies in those relations to general pathology to which I then referred: their surgical relations have at present, I believe, been scarcely studied.

The ERECTILE OR VASCULAR TUMOURS include most of the diseases which are described as vascular nævi, and of which the types are the subcutaneous nævi. Among them, also, are the growths to which John Bell gave the name of aneurism by anastomosis, and those which have been called Telangiectasis.

The name "erectile tumour" has, of late years, come into general use, as expressing a principal fact concerning these diseases, namely, that many of them resemble very closely in their texture that of erectile or cavernous tissue. Mr. Humphry* has, indeed, rightly objected to the use of the term, that these tumours present no imitation of the erectile tissue in the power of filling themselves with blood, as if by some internal force. But, since this power of the true erectile tissue depends as much on the accessory structures of nerves and muscles as on the tissue itself, we may perhaps apply the term "erectile" to the tumours, remembering only for this, as for other structures occurring in tumours, that the imitation of the natural tissue is imperfect, or partial. However, if any be scrupulous in the use of these terms, we may call these tumours vascular, or cavernous, or even Telangiectasis.

The likeness which these tumours bear to the erectile tissue, as exemplified in the corpus cavernosum penis, is sometimes, in general appearance, perfect. A well-marked

* Another similar tumour has since been slowly growing in the same lip: a recurrence which, I have no doubt, is independent of malignancy.

† Ueber die Cyste, 1849; and, Anatomie des Kropfes.

specimen is in the Hunterian collection;* it was removed from under the lower jaw, and its cut surface displays a close network or sponge of fine, smooth, shining bands and cords, just like those of the corpus cavernosum penis, only less regular in their arrangement. The opportunities of examining such tumours in the recent state are very rare; they are usually spoiled by the operation for removing them; and I have not been so fortunate as to obtain a single good specimen fit for minute examination. But, what I have seen, and the descriptions which more fortunate watchers have recorded, leave little doubt that this imitation of erectile tissue is a frequent character of such tumours.

John Bell's account† of the aneurism by anastomosis, which is by far the most vivid and exact, in relation to the history of the disease, that has yet been published, accords with this statement. Although he had chiefly in view the arterial variety of these tumours, yet, of one he says,—“The substance of it was cellular, stringy, and exactly resembling the corpora cavernosa penis. . . . the cells were filled with blood from the arteries, which entered the tumour in all directions.” Another he compares to a sponge soaked in blood; and the descriptions of other examples, though less explicit, imply the same. The descriptions by Mr. Wardrop,‡ and Mr. Caesar Hawkins,§ and the more minute accounts of structure by Mr. Goodsir,|| and Mr. Liston,¶ and Rokitsky,** confirm this view; and neither Mr. Birkett's,†† nor any other that I have met with, is discordant from it.

The essential structures of the disease are, according to these descriptions, derived from such a growth of blood-vessels, or rather of blood-spaces, that, in imitation of erectile tissue, the arteries are numerous but comparatively small, and, as we may believe, the capillaries or intermediate vessels open into veins so large, and so closely branching and anastomosing, that scarcely any continuity of tube can be discerned. Thus the whole mass seems formed of cells or spaces, opening widely into one another: and no remains exist of the walls of the veins, or of the tissue naturally lying between blood-vessels, except those narrow bands and cords that bound and intersect the cell-like spaces.‡‡

* Mus. Coll. Surg. 301-A.

† Principles of Surgery, vol. i. p. 456., e. s.

‡ Medico-Chir. Tran., vol. ix. p. 201, and pl. vi.

§ MEDICAL GAZETTE, vol. xxxvii. p. 1027.

|| Northern, J. of Medicine.

¶ Med. Chir. Trans., vol. xxvi. p. 125.

** Pathologische Anatomie, i. 276.

†† Med. Chir. Trans., vol. xxx.

‡‡ What tissue may remain between the blood-vessels depends on the seat of the nœvus. The elements of the organs or tissue in which it has

But while this form of tumour, in which the erectile tissue is imitated, may be taken as, in some sense, typical, we find, on either side of it, deviating forms. In some instances, the enlargement of arteries far exceeds that of veins; the swellings pulsate, and are florid and over-warm, and the tissues forming them may appear, for a time at least, hypertrophied. Some, I think, have described such arterial tumours as formed by the convolutions of a single artery, but they seem more commonly to be due to the dilatation of many anastomosing and closely clustered arteries. Such was the case in an instance recorded by Mr. Coote:* arteries of the lip, which, in their natural state, might not have had a greater diameter than a large pin, were dilated for about an inch of their course into sinuses or canals, and were equal in diameter to the adult radial artery. Similar to this was a very formidable case, lately cured by compression, under the care of Mr. Lloyd. The temporal, supraorbital, and occipital arteries, all exceedingly dilated and tortuous, converged to a large pulsating swelling over the sagittal suture.

On the other side are tumours formed mainly of overgrown, dilated, and sacculated veins. Arterial branches may, and I think usually do, pass into these; but some of these tumours seem wholly venous, as if all the dilatation of vessels were beyond the capillaries; and in these cases Rokitsky's expression is very applicable, that the circulation through the tumour may be compared with that through a portal vein.

Hence, speaking generally, it may perhaps be rightly stated, that among these vascular or erectile tumours, that which is common to all is an over-extension of blood-vessels or blood-spaces within a circumscribed space. We may assume that in different cases the change may chiefly affect either the arteries or the veins; or that it may affect both in such proportions as to produce an exact structural imitation of the erectile tissue. Or, we may assume that, in all cases, the capillary blood-vessels are the chief seats of the dilatation: and that as they grow they may, according to the state of the circulation in them, and their relations to other blood-vessels, have the character of arterial or venous plexuses. This last interpretation is as consistent as the other with the observed appearances

its seat will remain between its vessels, wasted or altered by compression or defective nutrition. They are seldom present in any distinct form; but a case is well described by C. O. Weber, in which abundant fibrous and fatty tissue occupied the space between the dilated vessels of an erectile tumour in a child's neck. Müller's Archiv, 1851, p. 74.

* MEDICAL GAZETTE.

of the vascular tumours, and is more easily reconciled with a fact that may be occasionally observed; namely, that "a *nævus*, which seems at first to consist only of arteries, after a time begins to exhibit veins under and around it, which veins may ultimately compose the larger part of the tumour."*

Whichever explanation we may adopt, the differences among these tumours naturally suggest that they should be called "arterial," or "venous," according to the character of vessels or of blood of which their mass consists. And a third intermediate form may pass by the name of "capillary," if it appear that the intermediate blood-vessels are the chief seat of dilatation and abnormal anastomosis.

Respecting the outer shape of the erectile tumours it is difficult to give a general account, since we can make only an artificial distinction between such as may bear this name, and those extended dilatations of cutaneous vessels which, with little or no swelling, form the cutaneous *nævi*, port-wine spots, and the like. These are evidently essentially the same diseases; the terms cutaneous and subcutaneous *nævi*, respectively applied to them, imply only their difference of seat; they have no real difference of nature, and are very often associated. But, if we include under the term erectile tumours only such as are for the most part or wholly subcutaneous, then it may be said that they are generally round or oval, disk-shaped, or spheroidal, but are often ill-defined, the morbid state of the blood-vessels in which they consist gradually merging into the healthy state of those beyond them. Sometimes, and especially in those of most venous character and of longest duration, the mass is circumscribed by fibro-cellular tissue, which forms a kind of capsule, and which is penetrated by the blood-vessels passing to and from the tumour.

To the touch, such tumours are usually soft, compressible, inelastic, feeling like a firm varicocele. Sometimes their bulk may be much diminished by pressure; and if they be cut into, a gush of blood takes place and they collapse, and then the blood may flow from them slowly, if it flow at all. In such cases as these the tumour is subject to variations, according to the state

of the general circulation, or to those retardations of the venous streams of blood which ensue in expiration. Or, when such swellings are chiefly arterial, they may pulsate with the adjacent healthy arteries; and such as these are liable to what appear spontaneous enlargements: they may become, for instance, turgid during menstrual periods, or during mental excitement, and may bleed, at these times, if any part of their surface be ulcerated.

The connections of erectile tumours with adjacent parts are commonly close, even if they are not ill-defined: the number of vessels passing to and from them, and the condition of these vessels, which often differs only in degree from that of the vessels within them, make them always possess the character of continuous growths. In some cases, the dilatation affecting the vessels round an erectile tumour extends to only an inconsiderable distance from the tumour; the arteries enlarge only just before they enter it; the veins regain their calibre soon after they leave it: and hence the general safety with which John Bell and many others have cut out such tumours, when they attended to the rule he lays down with such emphatic repetition, that for such a tumour we are "not to cut into it, but to cut it out."

However, sometimes the limit of the disease is not so circumscribed; it gradually fades out; and, indeed, whether we trace the disease from the mass of the tumours into adjacent parts, or trace it in different specimens, it is not difficult to observe a regular gradation from the erectile tumour, through clusters of dilated and tortuous vessels, to that which we regard as merely the varicose condition of the veins or arteries. Such transitions are well shown in some of Cruveilhier's plates, and in a remarkable case by Dr. Hake and Mr. Image.*

We have comparatively few examinations of the forms of the blood-vessels within erectile tumours. The chief are those by Virehow,† who has observed that even the small vessels in them are unequally dilated and sacculated, just as those larger ones are that we can see externally to the chief mass of the disease. The same is observed by M. Robin,‡ who describes an erectile tumour in which, along the track of the vessels, numerous little *culs-de-sac* existed, which the blood might at will be made to enter and quit by alternately pressing and relaxing a piece of the tumour on the field of the microscope. They could be seen on

* Warren's Observations on Tumours, p. 414. Rokitsansky's view accords with neither of these assumptions; he regards all these tumours as new growths with preponderance of formation of blood-vessels by absorption of the solid blastema. But can this view be reconciled with the fact of dilatations, nearly imitating the erectile form, being found in well known arteries or veins near the erectile tissue? See, *e.g.* the case by Dr. Hake and Mr. Image, in the Med. Chir. Trans., 30; and many of those recorded by John Bell.

* Medico-Chirurgical Translations, vol. xxx.

† Archiv für Pathol. Anatomie, B. iii. p. 437.

‡ In Lebert, Physiologie pathologique T. ii. p. 99.

vessels as small as $\frac{1}{3}$ of a millimetre in diameter; they were generally smaller at their connection with the vessels than at their other ends, and were commonly twice as long as the vessels were wide.

The cases of erectile tumour which in this description I have chiefly had in view, and which appear, indeed, to be most frequent, are those of the subcutaneous tissue. But they may be found with similar characters in many other parts, as *e. g.* in the muscles,* the bones,† and, according to Rokitsky, more frequently than anywhere else, in the liver.

These are the principal facts that I can cite respecting the structure of erectile tumours; and though they be very meagre and leave much for further enquiry, yet they may suggest some things worth consideration. Chiefly, they present the singular instance of the apparent primary growth of blood-vessels. In all other tumours, as in all anormal products, the formation of blood-vessels appears to be a consequent and subordinate process; as in the natural development of parts, so in what is morbid, organization to a certain point precedes vascularity, and the formation of blood-vessels follows on that of the growths into which they pass. But here the case appears reversed: the calibre of the blood-vessels increases, and the solid tissues between them diminish; all the growth of an erectile tumour is an enlargement of blood-vessels, with diminution of the tissues in which they ramified; or, rather, it is often an enlargement not of blood-vessels but of blood-spaces: for though, in the first stages of the disease, the walls of the vessels may grow, thickening and elongating so that the vessels become tortuous, yet after a time the walls waste rather than grow; apertures seem to form through mutually apposed blood-vessels, and at length, while the blood within the tumour increases, the blood-vessels containing it diminish together with the parts in which they ramified. Hence, at last, in place of branching and anastomosing tubes there is only a network formed of the remains of their walls. This is therefore an

increase of blood-spaces rather than of blood-vessels; so far as solid tissue is concerned, we might call it a wasting rather than a growth; no new materials seem to be added, but step by step the blood-vessels are dilated, and the intervening tissues clear away, leaving room for more and more blood.

Such a fact is, I think, at present quite inexplicable; and it constitutes a great difference between these and any other diseases named tumours.

But, leaving in this unfinished state the anatomy of erectile tumours, let me pass now to some of the facts concerning their life. We may notice, first, their frequent beginning before birth, and their especially quick growth in early childhood. Beyond all comparison they are the most common of congenital tumours. Hence, mother-spot is almost synonymous with *nævus*, and *nævus* with erectile tumour.

However, erectile tumours may begin, or may accelerate their growth, at any period of life. I have seen one of which no trace existed till the patient was twenty-five years old; and another in which rapid growth began for the first time when the patient was past fifty. Dr. Warren mentions a case of erectile pulsating tumour about the angles of the eyes and the forehead, which began in a girl seventeen years old. Many others, no doubt, have seen similar cases.

Their growth is uncertain; they may seem at rest for many weeks after birth, and then grow quickly, and then again may stay their growth.

Their maintenance of life, if I may so term it, is not strong. They are much more apt than the natural tissues are to slough or ulcerate after injury; and, in general disturbances of the health, they may perish altogether. I know of a case in which a large subcutaneous *nævus* in a child's forehead sloughed, while another on its back, of much less size, was in process of sloughing after the application of nitric acid. Similar apparently spontaneous sloughings have occurred during, or in the debility following, measles or scarlatina.

Their diseases are of much interest: especially two amongst them,—namely, the formation of cysts, and that of malignant structures in their substance.

I just referred to the formation of cysts in erectile tumours when speaking, in the second lecture, of serous cysts in the neck, and of sanguineous cysts. The history of the changes by which an erectile tumour becomes in part or wholly cystic is very incomplete; for the opportunities of observing them, except when they are accomplished, are very rare. The principal fact is, that next to the erectile tumours, those that are composed of clusters of serous or

* See especially a case by Mr. Liston, l. c.; and one by Mr. Coote, l. c.; and Cruveilhier, *ivr.* xxx. pl. 5.

† Among these may be included, probably, some of the cases described under the name of Aneurism of Bone and Osteo-Aneurism; as by Dr. Handisyde "Probationary Surgical Essay," Breschet, and others. But I am far from convinced that in all the cases thus entitled the blood-vessels of the bone were primarily or chiefly diseased. My impression is that, in many of them, the disease was really medullary cancer of the bone with excessive development of vessels, and that, in some, it was such a blood-cyst as appears to be sometimes formed in the course of a medullary disease.

sanguineous eysts appear to be the most common congenital form, and that in some cases the two forms appear to have been present in one mass. I referred, in the second lecture, to such a case as recorded by Mr. Coote. Mr. Cæsar Hawkins,* also, had before described similar cases. He says of one, "you may see, in addition to the usual vessels, that several apparent cells exist. Some of these were filled with coagulum; their structure appeared identical with the other veins, of which they formed, as it were, aneurismal pouches. . . There were, however, besides these, some other eysts, which contained only serous fluid, and which were, to all appearance, close-shut sacs—serous eysts—their size being about that of peas."

In other instances, no erectile or nævous structure can be found, but the communication existing between one or more among a cluster of eysts and some large blood-vessel, makes it probable that they had the same origin. Thus, Mr. Coote traced a vein, as large as a radial vein, opening into the cavity of a eyst, which formed one of a large cluster removed by Mr. Lawrence from a boy's side. The mass formed by these eysts had existed from birth; some of them contained a serous fluid, others a more bloody fluid. In another similar cluster removed from a boy's groin, one eyst appeared to communicate with the femoral vein, or with the saphena at its junction with the femoral. In one case mentioned by Mr. Hawkins,†

when a eyst in the neck was opened, arterial blood gushed out. In another the patient died with repeated hæmorrhages from a eyst in the neck, and this eyst was found after death to be one of several, into some of which the blood-vessels of the isthmus of the thyroid glands opened.

It is difficult to interpret the formation of such eysts in nævi, or in connection with them or with veins. It may be that, as Mr. Hawkins believes, eysts are formed in these, as they may be in many other tumours, and that gradually, by the absorption produced by mutual pressure, they are opened into communication with one or more of the veins, or of the sacs connected with the veins. Or, as Mr. Coote suggests, it may be that certain of the dilatations of the vessels are gradually shut off from the stream of blood, so as to form shut sacs; and that after this their contained blood is absorbed and replaced by serous fluid.

Lastly, respecting the production of cancerous disease in the tissue of erectile tumours, it seems to be generally regarded as a frequent event, and these are commonly believed to afford the most frequent instances of malignant growths supervening on such as were previously innocent. I will not doubt that such events have happened. Especially, in one case recorded by Mr. Phillips,* the transition appears to have been very clearly traced. Yet, I think that in many of the cases which have gained for erectile tumours their ill-repute, a clearer examination would have proved that they were, from the beginning, very vascular medullary cancers, or else medullary cancers in which blood-eysts were abundantly formed.

* Medico-Chirurgical Transactions, vol. xxii.; and MEDICAL GAZETTE, vol. xxxvii. p. 1027.

† The specimen is in the Museum of St. Bartholomew's.

‡ Clinical Lectures in the MEDICAL GAZETTE vol. xxviii., p. 483.

* On Vascular Tumours, in the MEDICAL GAZETTE, vol. xii., 1833.

P.S.—The frequent confessions of ignorance and of imperfect knowledge contained in the foregoing pages may have suggested to readers, as to myself, that it would have been better not to publish these lectures. Yet, the necessity of such confessions may justify, in some measure, the publication, while much of the imperfection of our pathology of tumours is due to the rarity of the opportunities of studying some among them. Even in the field of a large hospital, one may pass years without an occasion for investigating certain of the points which it is most desirable to determine. In seven years I have been able to collect complete records of nearly three hundred cases of tumours, and to illustrate most of them with microscopie and other sketches. From such materials the statements I have ventured to make have been derived. But such materials are very insufficient. For example, as I have stated in the last lecture, I have had no good opportunity of examining an erectile tumour; of some others I have seen only one or two instances in the recent state; and some tumours, whose characters as described by good pathologists I cannot doubt, I have never yet seen.

A good end, therefore, may be served by the publication of the lectures, if I have only shown where our knowledge is most imperfect, and where it may be readily improved if others will engage in the necessary inquiries, or will supply with more ample materials those who are engaged in them. While wishing for such help I will not omit to thank many who have already given it; and especially my colleagues at Saint Bartholomew's, whose cases I have been allowed to study and to publish, with all the advantages of their assistance.

Original Communications.

SCROFULA AS IT AFFECTS THE
EXTERNAL LYMPHATIC
GLANDS.

BY T. BALMAN, M.R.C.S.

Surgeon to St. Ann's Dispensary, Liverpool.

[Continued from p. 1031 of the last vol.]

Pathology.—Before entering upon the different morbid changes which the absorbent glands undergo in scrofulous disease, it may be well to examine shortly the normal anatomy of these bodies, to see how far the peculiar arrangement and distribution of natural structures may serve to explain some of those degenerative changes in these organs previous to, and consequent upon, the formation of a product which most pathologists consider as belonging to some form of tubercular matter; this product being identically the same here as in the lungs and other highly vascular textures where it has been found.

A lymphatic gland consists of a fine net-work of lymphatic vessels, which, according to Mr. Goodsir, on entering the gland, lay aside all their tunics but the internal, the epithelium of which is highly developed, having a fine net-work of capillary blood-vessels to supply matter for its continued renovation; the external tunic of the extra-glandular lymphatic passes on the surface to form its capsule. There are also nerves, filamentous tissue, and corpuscles, similar to those found in other conglomerate glands. We have here, then, a congeries of minute vessels closely packed together into a small, flattened, bean-shaped organ (for the performance of some particular functions in the animal economy, the precise nature of which appears as yet not quite understood), especially liable to favour the delay or to retard the motion of the circulating fluid: hence the reason of the congestion and tumidity which we so frequently see to arise sometimes from slight and almost inappreciable causes. Moreover, from the peculiar structure of these bodies, any unnatural materials, whether brought in contact with or formed by them, cannot escape, and must therefore accumulate and cause

their enlargement. In this way inflammation is established, which most frequently terminates in the total destruction of the organ. Keeping this in mind, we shall have no difficulty in understanding the different morbid appearances presented in tubercular degeneration of these organs.

Dr. Abercrombie, who has very carefully described these appearances, says,* —“In their first state of simple enlargement, these glands present, when cut into, a pale flesh colour, and a uniform soft fleshy texture. As the disease advances, the texture becomes firmer, and the colour rather paler. In what may be considered as the next stage we observe portions that have lost the flesh-colour, and have acquired a kind of semi-transparency, and a texture approaching to that of soft cartilage. While these changes are going on, we generally observe in other specimens the commencement of the opake white structure, which seems to be the last step in these morbid changes, and is strictly analogous in its appearance and properties to the white tubercle of the lungs. In a mass of considerable size we can sometimes observe all these structures often in alternate strata,—some of the strata being composed of the opake-white matter, others presenting the semi-pellucid appearance; while in other parts of the same mass we find portions which retain the fleshy appearance. In the most advanced stage the opake-white, or ash-coloured tubercular matter, is the most abundant; and this afterwards appears to be gradually softened, until it degenerates into the soft, cheesy matter, or ill-conditioned suppuration, so familiar to us in affections of this nature.”

Mr. Dalrymple† seems to have carefully examined the microscopic structure of one of these scrofulous glands, which is thus detailed in Mr. Phillips's work:—“This enlarged gland appears to consist of a general parenchyma in a state of chronic inflammation, surrounding irregular masses of yellowish-white matter, more immediately the subject of examination. In direct proximity to the edges of this white material, the blood-vessels are seen to be more enlarged and congested than elsewhere; and in some parts the capillaries are

* Med.-Chir. Trans. Edinb., vol. i.

† Ibid. page 48.

occluded with coagulated blood. The parenchyma, which at first sight appears healthy, is, on examination with high powers, found to be infiltrated with exudation-corpuscles resembling lymph-globules. The natural texture of the gland consists of its proper corpuscles, filamentous tissue, blood-vessels, lymphatics, and nerves. In this morbid specimen every where is the filamentous tissue infiltrated, and its fibres separated by innumerable exudation-corpuscles, and the proper corpuscles of the gland are similarly surrounded and imbedded. As the parenchyma is nearer to the white matter, so, proportionally, do the proper corpuscles of the gland become more indistinct; the filamentous tissue more obscure; the blood-vessels irregularly dilated, and filled with red globules; and they at last disappear insensibly. The exudation-corpuscles are more numerous, but irregular in size and shape, and interspersed with minutely granular matter." I have occasionally met with round concrete masses of tubercle in the interior of the gland enveloped in a thin pellucid cyst, the more fluid or animal portions having been absorbed, leaving little else than a putty calcareous substance of phosphate of lime. In such cases, I believe, the disease may remain quiescent for years, the new organized cyst or covering appearing to remove it from the influence of the neighbouring textures, and thereby preventing that irritating action upon them which seems to be the chief reason why subacute inflammation is so frequently set up in the vicinity of the morbid product, the tendency of which must be to accelerate the destruction of the organ.

Mr. Phillips ingeniously asks,—“Is this state of the gland characterised in most cases by a considerable increase of volume, density, and vascularity, determined by the circulation within it of blood which has undergone a change, or is it independent of the blood? Does the blood fit this organ to receive the deposit, or does the organ fit itself? It is probable that each of these causes may in turn contribute to bring about the first development of the disease: for example, we frequently see scrofulous glandular enlargement produced by purely local causes in persons where the diathesis or predisposition to the disease exists,—as when it follows blows or other injuries, exposure to cold currents

of air,* or from irritation proceeding from some adjacent part. The gland here swells and becomes painful, as in other injured structures; but in place of passing through the different stages of healthy or acute inflammation, the exuded plasma has a tendency to degenerate into a low, lifeless, withered material, which we have seen to be the condition of the organ in the more advanced progress of tubercular disease. In other cases, the enlargement may, at the onset, be in a great measure due to the delay consequent upon some abnormal condition of its own proper secretion. That the mesenteric glands become tumid and diseased by the contact of a depraved and vitiated state of the chyle in ill-fed children, appears very generally admitted; and it appears to me no less probable that the lymph-glands do not unfrequently become embarrassed by the accumulation and blocking up of the delicate tubules of the gland. The effect of this functional derangement would be thickening and engorgement of the cellular structures, binding these tubes together with a greater or less amount of hindrance to the circulation of blood throughout the entire organ: in fact, we might expect to find precisely the same structural changes as in the former case. But whatever is the first link in the chain of morbid action, it appears very certain that increased vascularity of the medullary structure of the gland is very constantly met with in the earlier stages of the disease, and that most of the subsequent pathological changes are, in a great measure, due to the disintegration and decay of the exuded plasma resulting from this impeded movement of the blood in the capillary vessels. Dr. Abercrombie, in the paper before alluded to, believed that the deposit from the blood which takes place in these scrofulous tumours consists of albumen; and he adduces some chemical experiments in support of his statement, which, as they accord with some of the most recent views regarding the formation of tubercle, I shall quote:—When a gland in the first state of enlargement, presenting the soft, fleshy appearance, is plunged

* This is probably the reason why this affection is frequently met with among washerwomen, cooks, and other domestic servants, who are obliged to be exposed to the heat of large fires, or enveloped in steam, and thus rendered more susceptible of taking cold, particularly in parts so constantly exposed as the neck.

into boiling water, it instantly contracts considerably in its dimensions, its texture becomes much firmer, and the colour changes from the flesh-colour to an opaque-white or ash-colour. By boiling for a short time, it loses a great part of its weight; but a residue is left, which has increased much in firmness during the boiling, has lost entirely the flesh-colour, and exhibits the appearance, consistence, and properties, of coagulated albumen. The part that is lost seems to consist partly of water, but chiefly of the muco-extractive matter; sometimes, but not always, there is a mixture of gelatine, and in some specimens the coagulated part gave traces of fibrine, but in small quantity. The proportions of these ingredients varied exceedingly in different specimens, and apparently in different periods of the disease. In the softest state in which I had occasion to examine glands considerably enlarged, they lost by boiling about five-sixths of their weight, the remaining part, or one-sixth, being a firm mass, with the appearance of the firm white tubercle, and the properties of coagulated albumen. Glands examined in what appeared to be a more advanced period of the disease, lost by boiling a smaller proportion, perhaps from two-thirds to a half. Portions in the semi-transparent cartilaginous state lost about a fourth, leaving three-fourths of their weight in the same state of firm opaque albuminous coagulum. The white opaque tubercular matter lost a still smaller proportion, perhaps a sixth; and when this could be procured in its dense and uniform state, and detached from any mixture of the other structures, portions could be found which scarcely lost anything in boiling, but seemed to consist almost entirely of a firm white substance, with all the properties of coagulated albumen. The specimens examined in these last experiments exhibited the usual appearance of the white or ash-coloured tubercle; and the same results were obtained from an examination of the white tubercle of the lungs, the tubercular disease of the bronchial glands, from tubercles of the liver, certain tumours of the brain, and from similar diseased masses in other situations.

It is not easy to ascertain the properties of the mesenteric or lymphatic glands in their healthy state, on account of the smallness of their size;

but, in some of the smallest that I could distinctly separate, and which appeared to be very little removed from the healthy state, I did not discover any trace of albumen. They were nearly soluble in boiling water, leaving only a small residue of a brownish friable matter, which crumbled when rubbed between the fingers. The dissolved part consisted chiefly of gelatine.

Much attention has recently been paid by pathologists to the state of the blood in tubercular disease; but, as yet, neither the chemical analysis or microscopic examination of this fluid has contributed much that can be said to explain many of the remarkable phenomena attending it. All writers agree that the red corpuscles are diminished in quantity, and the serous and watery parts of the blood correspondingly increased, without the fibrine undergoing any very perceptible change. The blood, therefore, seems somewhat analogous to the condition of this fluid observed in chlorosis, and other anæmic diseases, with this difference, that the red corpuscles never descend so low in any form of tuberculosis as in the former case; and further, that the proportion of albumen is always much greater in tubercular affections.

MM. Becquerel and Rodier, and Mr. Phillips, found the saline matters of the blood increased. In 67 cases examined by the latter gentleman, the proportion of salts in almost every instance exceeded the healthy standard: in some instances it was nearly double. Glover and Nicholson, on the contrary, found the salts nearly normal—oftener below than above the normal standard.

I have before drawn attention* to the large increase of the colourless corpuscles of the blood in scrofulous disease of the lymphatic glands. A more extended series of observations since this period has fully satisfied me that this phenomenon is very constantly associated with this class of diseases. It seems more especially marked in the suppurative stage of the disease.

Treatment.—Perhaps there is no subject in the whole range of medical science more complicated, or beset with greater difficulties, than the treatment of scrofulous tumours, and, I may add, scrofula generally. Hence it too frequently happens that, resisting for a

* MEDICAL GAZETTE, vol. xlvii. page 147.

long time the best appliances of our art, the practitioner becomes either tired or disgusted with his patient; and the unfortunate sufferer has no alternative but to become the prey of a host of unprincipled charlatans, who, by either promising immediate relief, or the more subtle dodge of holding out a distant prospect of cure, induce their misguided victims not only to deprive themselves of the common necessities of life which they stand so much in need of, but likewise to pledge articles of furniture, and even clothes, to pay for their nauseous compounds. It was the knowledge of several facts of this kind, which I collected in the discharge of the duties of a dispensary, that first more particularly drew my attention to the subject of this paper; and I accordingly, with the sanction of my colleagues, made it a speciality in my practice; and, although very much is wanting before our knowledge of this disease can be said to be complete, yet I would fain hope that the time and labour I have devoted to it during the last three years may not be altogether void of interest and improvement to some at least of those of my readers whose opportunities of observing cases of this kind have been comparatively more limited.

I shall first dispose of the local and surgical management of these cases—afterwards speak more particularly of the constitutional treatment, and the use of such drugs as have more immediately come under my notice. We shall suppose that all the means within our reach, both local and general, have failed to arrest the progress of the disease, and that the tumour progresses slowly and steadily on through all the varied stages of inflammation, softening, and decay of the glandular parenchyma, to the final elimination of the morbid products by the usual process of suppuration. Is there in all this, it may be asked, anything demanding more than the usual routine of treatment required in suppurating tissues affecting any other part of the external surface of the body? To this any one who has carefully watched the progress of a single case will unhesitatingly reply in the affirmative. Much time may be saved, no little disfigurement to the patient avoided, by judicious management, in almost every stage of the disease.

I have before stated the distinguishing features of scrofulous tumours to be their slow growth, the absence of pain and tenderness to the touch, and the preservation of the usual colour and appearance of the skin. This may continue for a longer or shorter period, according to the particular temperament of the individual, neglect of hygienic or other means, which will certainly at no distant period change the aspect and condition of the swelling. The parts now become painful to the touch; the surface assumes a livid or purple colour—in fact, inflammation is now set up in the neighbouring textures. Effusion very frequently takes place exterior to the body of the gland contained in and circumscribed by the adjacent cellular membrane. This effusion may become organised, and thus continue for a considerable time; but, more commonly, effused plasma, in place of becoming organised, is rapidly transformed into pus. Now we know that it is the property of all matter to approach the surface, even when there is less opposition in other directions. The absorption should take place most actively towards the skin; but the abscess in these cases excites so small a degree of irritation that the rapid absorption of the intervening textures and pointing of the abscess does not quickly happen. We have, therefore, an increase of the abscess at the expense of the surrounding cellular tissues. It may at last be limited by adhesive inflammation, which checks its further progress; but, more commonly, where the constitution is much enfeebled, the matter creeps slowly along the cellular membrane under the skin, and between the muscles, sometimes at great distances, leaving deep and extensive sinuses always difficult to manage. In either case, the vitality of the skin and integuments covering the abscess generally becomes so weakened and impaired by the slow destruction of its nutrient vessels, that, when the matter does make its way to the surface, naturally or otherwise, we find there is little or no disposition to unite with the subjacent textures, or to throw up granulations; so that the destruction of the skin corresponding with the surface of the abscess is almost inevitable. This always retards the filling up of the wound; and it has therefore been proposed to open the abscess by making

an eschar with caustic, so as to destroy the whole extent of the skin corresponding with the circumference of the abscess, with a view of hastening this process, and, I am disposed to think, with the prospect of favourable results; for we generally find this to be eventually accomplished by Nature before anything like a healthy granulating surface is produced.

There is another peculiarity which distinguishes a suppurating glandular tumour from a common abscess, calculated in no small degree to retard the curative process. The principal part of the swelling in these cases is made up of the engorged gland, surrounded by a thin layer of purulent matter, so that, on being opened, there escapes only a very small quantity of pus in comparison with the size of the tumour; the swelling, therefore, remains pretty much the same size as before. The walls of the abscess collapsing come in contact with the diseased cellular membrane and hypertrophied gland, which not only prevents the adhesive process from taking place, but, by acting precisely as a sponge-tent, or any other foreign body, necessarily retards the filling up of the wound, and a thin purulent fluid continues to be discharged as long as any portion of the gland remains.

The case is rendered still more tedious and protracted when the deeper-seated glands are affected, and particularly if the matter has burrowed at some distance from the part before finding its way to the surface: and here it very often happens that the fistulous opening or channel communicating with the abscess is too small to allow of more than the fluid parts to escape, whilst a shreddy mass of degenerate tissue is retained. The wound may continue discharging through this small fistulous passage for months without the swelling undergoing any very perceptible diminution in size, until, perhaps, by the continued mechanical distension, the skin and integuments become so weakened, and their vitality so impaired, that a communication is established over the original seat of the abscess. The subsequent changes are pretty much the same as those just described. Much that I have now stated is applicable to other cases of inflammation affecting the absorbent glands, as well as those of a purely strumous character: for

instance, sympathetic abscesses of the axilla and groin, from wounds and other injuries of the extremities, are sometimes equally difficult to manage, and sometimes pursue pretty much the same tedious course. It is not common, however, to find inflammation set up in these regions from such causes to suppurate unless the irritation be of long continuance. I have seen tedious abscesses of this kind to occur more frequently from injuries of the forearm, in which small fragments of glass or other irritating substances had in all probability remained in the wound for some time after the accident. It is not in every scrofulous affection of the glands that the adjacent tissues become so much involved: the severity of this complication will of course depend very much upon the state of the constitution, the rapidity with which the tubercular degeneration of the gland takes place, and likewise the degree of organization possessed by the morbid material so deposited.

The chief indication to be attended to in the treatment of scrofulous abscesses is clearly to save as much of the skin and integument covering the gland as possible, as a means both of cutting short the duration of the disease and avoiding those scars and unseemly marks which tend so much to disfigure and annoy the unfortunate victims of this complaint. With this object, as soon as the least feeling of fluctuation is perceived by the fingers, whether the skin be discoloured or not, an opening should be made to allow the matter to escape, for the longer it remains the greater will be the loss of skin and the larger the cicatrix which follows the healing of the wound: moreover, by opening the abscess early, immediate union of the skin with the subjacent textures may soon follow, and the sore get well. This may sometimes be promoted by stimulating and astringent washes, which should be injected into the cavity of the abscess soon after the opening is made. Should the matter, in place of being circumscribed, have insinuated itself under the skin at a distance from the original seat of the disease, and the external opening not be sufficiently large to allow of the free exit of the matter, the opening should be enlarged with a bistoury, and the sinuses injected in a similar way. For this purpose I prefer a weak solution of

nitrate of silver or the sulphate of zinc, five or six grains to the ounce. Should these means fail, the sinuses must be laid open through their whole extent, the callous edges dissected away, and, by the application of unguents or washes, healthy granulations may be established, and the healing process accomplished with no very great disfigurement.

If, as it very commonly happens, from the mechanical distension of the engorged gland, that the vitality of the skin is so enfeebled that sloughing ensues, the case is rendered long and tedious; the wound gradually enlarges as far as the limits of the diseased gland, and continues in this state as long as the least remnant of this body remains. This impediment to the healing process being removed, the wound fills up by granulations, as in ulcers situated in other parts of the body.

The best application for almost every kind of scrofulous sore is certainly the iodide of lead ointment: the Ung. Hyd. Nit. Oxid. is more stimulating for some very indolent and flabby sores; but the former has generally succeeded with me so well that I now seldom use any other.

The disposition to scab seems very remarkable in all these kind of sores; and, however beneficial this process may be in other wounds, it very nearly always tends to impede, rather than otherwise, the healing of scrofulous ulcers, not only by preventing granulations from forming, but, by allowing the ill-conditioned materials to accumulate and fester under it, causes further destruction to the subjacent tissues. I have generally, therefore, directed a poultice to be applied until the sore becomes clean, and then endeavour to prevent their reproduction by some of the stimulating applications already alluded to. I have used a cataplasm composed of bran, linseed, and common yellow soap with very good effect in these cases.

Seeing the tedious and protracted nature of these sores, and the deformity that almost always attends the healing of the wound under the most favourable circumstances, points out to us the desirability of endeavouring to prevent an abscess from forming, and to use all the means within our reach, both general and local, calculated to disperse the swelling prior to its arriving at that stage when the elimination of the morbid products by suppuration becomes

inevitable. This leads me briefly to notice some of the means by which this object may sometimes be accomplished.

We have observed, in the first part of this communication, that these glandular swellings are met with under a great variety of circumstances. The patient may, for example, present the fine, delicate, white skin, the tumid lip, and crimson hue of cheek, and the languid, listless, and enfeebled gait so familiar to us in persons possessing the well-marked lymphatic temperament; or all these signs of the strumous constitution may be for the most part wanting, and we have the outward characters of a sound and vigorous constitution; or there may be evidence of a previously acquired syphilitic taint sufficient to justify our pronouncing this to have been the primary *exciting* cause of the disease. A disease, therefore, occurring under so many and varied aspects must of necessity require different modes of treatment. If, for instance, the swellings appeared for the first time after an attack of primary syphilis, the iodide of potassium and sarsaparilla will be found the best remedy, all other remedies, as far as my experience goes, being perfectly useless.

I have made trial of most of the reputed antiscrofulous remedies, and must confess with very indifferent results. The following, however, deserve some notice:—mercury, barium, iodine, alkalies, cod-liver oil, &c.

Mercury.—Of the different preparations of this metal I have commonly preferred the Hyd. c. Cretâ and the bichloride. The former may be given, in combination with rhubarb and magnesia, as an alterative aperient, every other night, or oftener, according to circumstances. The benefit accruing from some simple combination of this kind, by improving the secretions, and giving tone to the digestive mucous surfaces, is often very striking; and, indeed, it is not uncommon to see some of the milder descriptions of the cases get well by a short continuance of these medicines alone. It should, I think, precede every other kind of treatment. The bichloride I have given in doses of 1-16th to 1-20th of a grain dissolved in distilled water, or in the form of a pill, with the Ext. of Sarsa, twice or thrice a day. I have seen it of use in cases of glandular swellings complicated with some of the more obstinate forms of

scaly cutaneous disease, and particularly psoriasis. Under these circumstances, and provided the general health be good, this preparation may be given with advantage. It sometimes rapidly causes the absorption of the intervening cellular tissue, by which several isolated tumours are often aggregated into one firm resisting mass; and here its beneficial operation seems to stop, the glands themselves being seldom completely dispersed by this remedy, however long continued. In irritable subjects it rapidly brings on suppurative inflammation, and this may be said to bring the case to a close earlier than otherwise might have happened.

Barium.—I have made trial of this remedy, so much extolled by some of the older writers, and am disposed to entertain a very favourable opinion of its efficacy, particularly in chlorotic, cachectic, and other cases attended with a languid circulation and much general debility; it seems, therefore, well adapted for females of a lymphatic temperament and attended with any irregularity of the menstrual function. I generally use it in combination with the muriated tincture of iron. \mathcal{R} Baryta Chlorid. gr. x.; Tinct. Ferri Mur. \mathfrak{z} ij. to \mathfrak{z} ss.; Syr. Aurantii vel Aq. Destillat. \mathfrak{z} x.—Mix; of this half an ounce to an ounce may be given two or three times a day.

Cod-liver oil has appeared to me to exercise little or no influence upon the great majority of external glandular tumours. It must, however, be admitted that it is a potent and most valuable remedy in some forms and complications of the disease: when associated with caries of the bones or phthisis, for instance, I almost invariably order the oil, as exercising a most beneficial influence in both these cases. Again, in many of those boggy and unhealthy sores which are observed to remain unchanged for a very long time, and are usually covered with a thin dry crust, which, on being removed, exposes a pale, soft, flabby ulcer, exuding a thin, grumous, unhealthy-looking matter; I have often observed these kinds of sores get well by a lengthened continuance of cod-liver oil, having previously resisted most other remedies. Whatever may be the rationale of its operation, there can be no doubt but that it supplies to the blood, and thence to the different tissues of the body, very important nutritive materials which

were previously wanting. Where, for instance, we see a sore exuding a thin colourless fluid as transparent as water, alkaline, and coagulating on the application of an acid, consisting of little else than the serous and watery portions of the blood, which we have seen to be so abundant in this fluid, incapable, therefore, of cell-growth and the production of new tissues, from a deficiency or imperfect assimilation of that higher organized material, the fibrine: if, under these circumstances, cod-liver oil, or any other agent, causes the sore to throw up healthy granulations and get well, it must be by supplying the blood with a more highly vitalized pabulum, which, by increasing the red corpuscles, substitutes for the serous and watery blood-liquor a plasma more in accordance with what we know to be the healthy and standard condition of this fluid.

Alkalies have for a long time been reputed as valuable anti-strumous remedies, and have been recommended very recently by some very high authorities. This has doubtless arisen in some measure from some partiality for, or the belief in, the antiquated doctrine which assumes that there is some specific acid principle pervading the animal fluids which determines the development of the disease. It is hardly necessary to state that this is a mere hypothesis; and I have, by some attention to this point, satisfied myself that there are no grounds whatever for believing that an excess of acid of any kind is generated either in the chylopoietic viscera or eliminated from the system with the different excretory products. It is quite true that the irregular appetite, bad digestion, and vitiated alvine discharges, do frequently in childhood precede the early manifestations of scrofula, and seem to point out the probability of there being an excess of acid generated in the primæ viæ; but it by no means follows that this should be one of the most important features of the disease. Not only on these grounds, but from practical experience, I have come to the conclusion that little benefit will result from any lengthened persistence in this class of remedies: on the contrary, I am disposed to believe that they are sometimes absolutely injurious, by deteriorating still more the already too impoverished blood. In proof of this I may mention that, during the trial I

made with the various alkaline preparations reputed to cure scrofula, I observed in many instances one of the commonest complications of this disease to appear: I allude to ophthalmia, which, as speedily yielded to the opposite treatment.

Iodine, either alone or in combination with potass, has succeeded but indifferently in my hands; and I believe it will be found that the value of this substance has been much overestimated. The iodide of iron, however, is a very excellent preparation, and may be given either alone or in combination with cod-liver oil.

Phosphoric acid.—In one of my former communications I casually alluded to phosphoric acid as a medicine which I had seen to exercise a very beneficial effect in a considerable number of cases. Since this period I have steadily watched its operation upon a more extended scale, and I do not hesitate to assert that, as a therapeutic agent, it will be found in no degree inferior to any before mentioned. Its effects are sometimes very marked in some of those obstinate forms of strumous conjunctivitis which we know will sometimes resist for a long time every kind of treatment, and at other times will quickly disappear under the influence of some simple local application, but perhaps as speedily return under the slightest exciting cause. In these (if one may so express it) intermittent forms of ophthalmia arising in a scrofulous constitution I have found this medicine of especial service, not only in completely removing the disease, but also in preventing its recurrence. I am in the habit of giving it in the infusion of Columbo, commencing with five minims of the dilute acid of the Pharmacopœia, gradually increasing it to twenty or more. This combination seems to agree very well with the stomach, and, unlike most other mineral acids, may be continued for any length of time without producing any unpleasant effects. Whether its beneficial effects are confined to its tonic influence, or exercise some more specific influence upon the blood and system generally, I do not know.

As regards the treatment of scrofulous swellings, I believe that much harm is sometimes done by the indiscriminate use of frictions with the iodine ointment and other compounds, by inducing a low form of inflammatory action in the

skin and integuments, and the chance of bringing on suppuration, which it is desirable in many cases, for reasons before stated, to prevent. On this account, and also from the fact that the action of all such applications is very feeble in dispersing the tumour under any circumstances, I seldom now have recourse to them.

In the absence of all signs of inflammatory action after a trial of some of the foregoing internal medicines, I prefer, as a counter-irritant, pencilling the part with the solid nitrate of silver a few times, at intervals of a week or ten days. This, I think, is a milder and safer proceeding than the use of blisters, the action of which is more diffusive and irritating.

It is hardly necessary to insist upon the utmost attention being paid to a variety of circumstances regarding the general management of scrofula; such as good and wholesome food, good air, sea-bathing, exercise, and various other hygienic means, which are known to exercise the happiest effects in every form and variety of this disease; and, if trusted to alone, would, I am persuaded, in many instances give the patient as good, if not better, chance of getting rid of this most intractable disease.

Oxford Street, Liverpool,
July 30, 1851.

ON
DISLOCATION OF THE STERNAL
END OF THE CLAVICLE.

BY JOHN L. MILTON, M.R.C.S.

DISLOCATION of either end of the clavicle is a rare occurrence. Complete dislocation of the sternal end I have never seen, and but very few cases are on record; while that of the scapular end, though much more common, is yet seldom met with, even by those who have the greatest opportunities of treating and viewing every variety of injury: indeed, the extreme firmness of its connections, and its great length and slenderness, render this bone much more liable to fracture than to dislocation.

When dislocated at its scapular end it is almost always upwards; of any other form I know nothing, having never seen a case; and as the *symptoms* are

well known and easily recognised, I purpose limiting the remarks I have to make, to the *treatment* of dislocation upwards of the scapular end of the clavicle.

This has been to a great extent unsuccessful in the very best hands, and some of our first surgeons have expressed themselves very decidedly upon this point. Sir Astley Cooper, in his work on dislocations, candidly admits the great difficulty there is in obviating the deformity and weakness which arise from it; he always told his pupils, "you are not to expect that the parts, after the utmost care in the treatment, will, in dislocation of either end of the clavicle, be very exactly adjusted; some projection, some slight deformity, will remain; and it is necessary from the first moment of the treatment that this should be stated to the patient, as he may otherwise suspect that it has arisen from your ignorance or negligence. You may at the same time inform him that a very good use of the limb will be recovered, although some deviation from the natural form of the parts may remain, in a slight projection of the sternum, or some elevation of the sternal end of the clavicle."

Mr. Fergusson, after speaking of the usual means of treatment, says, "these means, however, combined with keeping the arm steady in a sling, will in all likelihood *not* have the desired effect; and moreover the pain which the injury occasions is not so great as to induce the patient to submit to the irksomeness of a continued application of such an apparatus."

Mr. Liston, in his *Practical Surgery*, says, "difficulty of preserving the parts in their natural situation will always be experienced, and the cure will be slow and imperfect;" and again, in his *Elements of Surgery*, "but, after the utmost care and patience, there still remains in almost every case, some projection more than before the accident. The ligaments are slow in uniting, and the union is *imperfect and weak*."

Dr. Knox, in his *Edinburgh Dissector*, tells us, "the cure is seldom or never complete, a slight projection of the clavicle always remaining, even in the most experienced hands."

Mr. Skey says, "to retain it (the clavicle) in contact with the articulating surface of the acromion is always a difficulty. This end, however, will be

attained by a firm compress on the articulation, full extension of the shoulder by means of a compress placed in the axilla, and elevation of the entire arm, which should be fixed at the side in a sling."

"In from four to six weeks," says Chelius, "the bandage may be removed; most commonly there remains greater or less displacement, which, however, does not interfere with the motions of the shoulder:" and his commentator, Mr. South, says, "the dislocation of the collar-bone upon the spine of the blade-bone is one of the most tiresome accidents we have to do with; at least in all the cases I have had to deal with, and the injury is not unfrequent, I have never been able by any contrivance to keep it in its place, and have therefore given up attempting to keep it reduced, and only endeavour to keep it at rest, so that it may form new connections on the scapular spine."

There seem to be only two grades of this luxation; one in which the acromion and clavicle are separated from each other, and one in which, in addition, the coraco-clavicular ligaments are torn, especially the conoid. Here there is much more displacement of the clavicle.

When its attachments are thus loosened and torn asunder, the clavicle rises,* a fact which appears to me deserving of the greatest attention, and which the anatomical connections of this bone forbid us to ascribe to anything but muscular contraction, for if forced down, and then released from pressure, it again rises. The voluntary muscles, when healthy, seem always to be at some degree of extension, for as soon as one of their fixed attachments is loosened, or brought nearer to the other by displacement of a limb or bone, they immediately contract, and remain so long after any stimulus has ceased to be applied. We see this very plainly in many fractures and dislocations, and the muscles of organic life seem to act in much the same way; they are *distended only* by forces foreign to their organization; *their only power is to contract*. Let us then see what muscles can act on the clavicle.

The clavicle gives attachment by the

* "And in severe cases the coraco-clavicular ligaments (are ruptured), in which case the clavicle not only rises, but projects, &c."—*Edinburgh Dissector*.

superior surface of its sternal extremity to the sterno-cleido mastoid; the longitudinal depression on its inferior surface to the subclavius; the anterior border by its sternal half to the pectoralis major; by its acromial third to the deltoid; the posterior border by its acromial third to the trapezius.

At first view it would appear that when left to the unimpeded action of the muscles, the clavicle must necessarily be drawn down and not up, for while it can only be drawn up by the trapezius and sterno-mastoid, and perhaps through the medium of the cervical fascia by the platysma myoides, it is acted upon below by the subclavius, deltoid, and pectoralis major. Its rising, therefore, seems only explicable on the supposition that the contracting power of the portions of these large muscles attached to the clavicle is weakened by the overstretching they are so violently subjected to. The force which tears through the strong coraco-clavicular ligaments may well tell on muscles.

Were the humerus alone depressed it would not be a very difficult matter to keep the bones in contact, but the contrary is seen in practice, for no skill has as yet proved successful; whereas if the clavicle be forced down towards the humerus, and the latter at the same time elevated, no such insurmountable difficulty is experienced. The second of the following cases will, I think, exemplify this as strongly as one instance can exemplify a rule.

My own experience of these injuries is limited to three cases, with the history of which I shall conclude this paper.

CASE I.—The patient, an old man, was working in the yard of a house at which the roof was being repaired, when some bricks fell from a great height upon him. He was brought into one of the London hospitals and dressed by the house-surgeon, whom I was at that time assisting. The dislocation was very complete, but the man was so severely injured that he sank on the third day after the accident, and consequently could not form a subject of treatment. No examination of the body after death could be obtained.

CASE II.—Some gentlemen were playing one evening at gymnastics, when one of them was thrown from a considerable height. The fall being

very sudden and violent, he pitched with such force with his shoulder on the hearth-stone, that it was at first thought he was killed by the blow. On being sent for I could detect no injury except a severe dislocation of the clavicle to such an extent as left no doubt on my mind that the coraco-clavicular ligaments were torn. As the patient seemed disposed to become delirious, the arm was simply confined, and quiet was recommended: this was on the 7th of April, 1846.

The next day the arm was bound up by means of the figure 8 bandage, a pad in the axilla, and a sling. The patient was seen by Mr. Coulson, who expressed himself satisfied with the way in which it was fixed, but stated some doubts as to the probability of an ultimate cure.

For twenty-four hours all seemed to go well, but after this nothing answered. If bound up moderately tight the bandages soon slackened, and the displacement returned; if strapped up tight the patient could not endure the torture. Mr. Hancock's apparatus was then procured, but the patient could not bear the pain it occasioned, nor could he sleep if it was kept on at night: in fact, in his communication to me, he says—"for one entire week I suffered intense agony."

It now appeared to me that, if I could depress the clavicle, the scapula could be easily maintained in contact with it; and this I accordingly set about doing in the following way:—Strips of moleskin plaster, long enough to reach from the crest of the ileum in front over the clavicle to the crest of the ileum behind, were fixed by one end to the fore part of the abdomen, and then thrown over the clavicle; their attachments were then secured by a broad band of plaster reaching nearly to the ribs. When well set, this gave a great purchase, and, by means of a thick compress placed crosswise on the clavicle, I bore this down. The ends of the moleskin were then applied to the back, and secured by the other end of the broad band passing over them: the humerus was now fixed in the usual way.

The patient now remained quietly at home for a week, feeling quite comfortable. The bandage was then taken off, and a fresh one put on. He was ordered fresh air, plenty of walking, steel medicines, and a nourishing diet.

By the 3d of May he felt so recovered that he insisted on having the bandages taken off, and accordingly went with me to Mr. Coulson, when, on the bandages being removed, a complete cure seemed to have taken place.

For a day or two this appeared to continue, but at the end of five days there was a marked return of the displacement, perhaps from his making too free a use of the arm. The bandages were therefore put on again, and, as a measure of precaution, were kept on till the 1st of June, when they were finally removed, and a sling substituted.

At this time there appeared no displacement whatever of the clavicle, and the patient, being enjoined to use no great exertion, discontinued attendance, so that I shall leave him to finish the narrative in his own words:—

“Between the 1st of June and the 8th I wore a dress coat, and went to the theatre, without suffering the least inconvenience.

“On the 31st of July (a very hot day) I went to the Holborn Baths for the purpose of having a bathe, and to test the cure of my shoulder by at least making an attempt to swim, upon which ability a grave doubt had been cast, when, to my great delight, I was able to swim fully as well, if not better, than before. Since that time I have swum, boxed, and used all kinds of hard exercise, without experiencing any weakness or diminution of strength in that shoulder.”

I have recently examined this gentleman's chest, and it appeared to me that there was really no difference between the two shoulders.

CASE III.—A labouring man was buried underneath a cart-load of rubbish. On being released he only complained of some bruises, and pain and weakness in his shoulder. On examination, I found that he had dislocated his clavicle. The accident was not nearly so well marked as in the foregoing cases, the conoid ligament having seemingly escaped: the clavicle was, however, somewhat elevated, and I satisfied myself by repeated examinations that I could depress it. The man was compelled by his circumstances to enter some hospital, and I never saw anything more of him, nor could I ever find him out by the address he gave me.

40, Jewin Street, City.

ON
POISONING BY SULPHURIC ACID,
AND ON ITS DETECTION IN THE BLOOD
AND VISCERA.

BY DR. GEOGHEGAN, PROF. R.C.S.I.

THE following observations are chiefly intended to prove that sulphuric acid does not, as hitherto believed, constitute one of the exceptions to the rule that poisons which have been absorbed may be discovered in the blood and in the structure of the secreting organs, &c.; and also to indicate a method by which its detection may be accomplished with facility by the practised inquirer. As the case which tends to establish the above doctrine possesses several features of interest, I propose giving a preliminary outline, having the permission of Dr. Butcher, Surgeon to Mercer's Hospital, to whose kindness I am indebted for the opportunity of observing it during life, and of attending the inspection.

A young and muscular female, previously healthy, committed suicide on June 29th, by swallowing, about noon, $1\frac{1}{2}$ fluidounces (as nearly as could be ascertained) of oil of vitriol. In about half an hour she was discovered lying on the ground, screaming with pain, retching, and incapable of speaking or swallowing. She was subsequently seen by a homœopathist, who, untrue to his principles (?), did *not* administer more *sulphuric acid*, but ordered a *mustard* emetic, and shortly afterwards consigned her to the care of a neighbouring allopath, by whom magnesia was injected into the stomach. The patient for three or four hours had vomiting, which did not subsequently recur.

There were none of the ordinary signs of collapse, except a sunken condition of the countenance, which continued throughout. On the next morning (having been removed to hospital) she was free from pain in the stomach, except on pressure, and had but little thirst. The belly was not swollen; the extremities and the surface warm; pulse 108, soft, and of considerable volume. She had passed a little slightly acid urine, and two alvine discharges, the latter having a carbonaceous aspect and peculiar odour. The most prominent conditions were now—a somewhat laboured inspiration, yet quite unattended

with any sign of *laryngeal* distress; loud mucous rattle in the fauces, apparently arising from accumulation produced by the extreme difficulty of swallowing;—fluids regurgitating through the nose. She was unable to articulate, or protrude the rather shrunken tongue; the angles of the mouth showed brown stains; the epithelium of the cheeks was white, opaque, and, in part, detached. There was no tenderness on external pressure of the fauces. Grave musical râles were audible in the lateral region of the left lung. The pulse became progressively weaker and more rapid, and respiration more difficult. She was sensible apparently a short time before death, which took place *thirty one hours* after the poison had been swallowed. The surface continued warm throughout.

Inspection.

Rigor mortis was complete *in three hours*,* and the interior examination was made twenty hours after death. Weather very warm. Putrefaction had set in actively in the abdomen, face, and subcutaneous cellular tissue.

Digestive tube.—Epithelium of the dorsum of the tongue was detached, thickened, cribriform, and of a yellowish-grey colour; that of the palatine arches and tonsils whitish in patches. The lining of the œsophagus was much plicated, and showed numerous yellowish-grey flocculi, slightly adherent, disposed along the summits of the plicæ, and more numerous near the stomach. The deeper parts of the mucous coat were injected. The inner surface of the stomach, for three quarters of its length from the cardia, was black, with a slight tinge of red, stained the fingers on handling, and exhibited numerous firm, rough, and very prominent ridges, which were found to be exclusively formed of the mucous coat infiltrated with altered blood. In the interspaces the membrane was partially destroyed, and elsewhere much thinned, and of a cherry-red colour: towards the pylorus the lining coat was greenish-grey, swollen, filamentous, and beset with small black

specks. A circular perforation, larger than a shilling, having a sharp and quite smooth edge, occupied the anterior wall of the stomach, between the cardia and the greater curvature, but nearer the latter. The inner coats were removed for some distance in the vicinity of the opening, and corrosion had, in a couple of spots, attacked the stomach *from without*. The organ was empty. The adjacent portion of the peritoneum contained a few ounces of olive-coloured, turbid, and non-acid fluid. The rest of the alimentary canal was natural. The uterus was lined with deciduous membrane, and one of the ovaries contained a large *corpus luteum*, with yellow plicated outline and interior area of blood and fibrine, but without central cavity.

Respiratory organs.—The epiglottis was reddish, and but slightly swollen; the aperture of the glottis open, and of *full size*. The greater part of the interior of the larynx, much of the trachea, and, in patches, the bronchial tubes, even to the smaller divisions, were coated with a thin and slightly adherent layer of the same coloured membrane as that seen in the œsophagus. In the intervals the mucous coat was vividly red, not thickened, and having little secretion. The tissue of the lungs was not much engorged, but redder than natural. The right pleura contained much bloody serum, the left a smaller quantity.

Circulatory organs and blood.—The pericardium contained a couple of ounces of bloody serum. The ventricles of the heart were distended with *air*. The auricles contained a good deal of dark, firmly coagulated blood, with some fibrine. The endocardium of left auricle had an opaque and corrugated appearance. The blood in the great thoracic and cervical veins was dark and fluid.

The great similarity of the membranous deposit on the œsophagus to that on the respiratory tube, suggested the inquiry, whether each consisted of a new secretion, or was the result of the local action of the acid on the epithelium.

In both parts it was found, by the microscope, to have the latter origin, the characteristic epithelial cells being quite distinct. It was hence to be inferred that a portion of the poison had entered the larynx. Accordingly, it was found that the latter and the trachea, when washed with distilled water, yielded a fluid of acid reaction; and, on the addition of chloride of barium, there was a slight white pre-

* It had made great progress in the lower extremities one hour and a quarter after death, much less in the upper; the body the meanwhile retaining its entire *warmth*. Rigor also continued undiminished after putrefaction had made much advance, as shown by discolouration and subcutaneous emphysema. These results are quite opposed to the statements of authors.

precipitate, insoluble in pure nitric acid. A portion of the blackish lining coat of the stomach, dissolved completely in liquor potassæ, with all the characters of hæmotosine, and a portion, macerated in a solution of bicarbonate of soda, was found to resolve itself into partially unchanged mucous membrane, entangling masses of altered blood, some of which had become dissolved. A little of the blackened part, which resisted the action of caustic potass, was altogether dissolved by strong nitric acid. Hence the poison had not, in the strict sense of the word, *carbonised* any portion of the mucous coat. I also found that repeated doses of oil of vitriol, introduced into a dead and empty stomach (at a temperature of from 60 to 70), did not carbonise, although it dissolved the coats, even to perforation. The first effect is to whiten the mucous membrane, which afterwards becomes of a slight clay brown.

Absorption of sulphuric acid.—The transparent liquors obtained by boiling separately in distilled water the blood, serum of pericardium, that of pleura, the tissue of the lung, heart, liver, spleen, and kidney, afforded, except the second and the last, no evidence of the presence of free or combined sulphuric acid. They were all, however, decidedly acid to litmus, and some of them submitted to distillation became more so. The liquor which passed over gave no trace of hydrochloric acid. The fluids obtained by boiling and filtering the blood and tissue of the heart gave a copious white precipitate by lime-water, which was found to be phosphate of lime. Two portions of the blood liquor, of equal weight—one of them neutralised by pure carbonate of potass—yielded, after having been calcined, neutralised by acetic acid, and precipitated by chloride of calcium, quantities of phosphate of lime, respectively as 7 to 3; the difference being due to the decomposition of the phosphoric acid, in the unneutralised portion, by the carbon of the accompanying organic matter.

Hence the evidence of the presence of free phosphoric acid in the blood seems complete, and appears referable to the action of the absorbed sulphuric acid on the alkaline phosphate. The resulting sulphate must be rapidly evolved, and the kidney is the probable channel of escape. This is further indicated by the positive action of chloride

of barium on a decoction of the latter, as contrasted with those of the blood and of other organs. Two portions (of 500 gr. each) of *blood from the heart*, one of which was previously mixed with a little crystalline bicarbonate of soda (found exempt from sulphates), were very carefully incinerated in a platinum capsule, washed with pure diluted nitric acid, and precipitated by chloride of barium. The precipitate was also washed with dilute nitric acid, and heated to low redness. The above equal portions yielded respectively of sulphate of barytes, 1.80 gr. and 0.05 gr.; the free being to the combined sulphuric acid (constituent of the blood) as 36 to 1. Two portions of the parenchyma of the liver (500 gr. each), the one dissolved in pure nitric acid, the other simply incinerated, gave respectively 2.70 grains and 0.15 grains; the free being to the combined sulphuric acid as 18 to 1.* Two portions (of 500 gr. each) of the kidney, calcined as above, yielded 1.2 and 0.35 gr. sulphate of barytes; the free being to the combined acid as 1 to 3½. In determining, however, the free sulphuric acid in this instance, there was an accidental loss: I estimate the true amount of sulphate as 1.4 gr. The spleen, neutralised and calcined, gave 3.1 gr. sulphate of barytes. Less than 1½ oz. of urine (slightly tinged with fæces) gave 7.55 gr. of barytes. The method employed in the case of the liver is a modification of that of Simon.† I prefer, however, the calcination of each portion, with the previous neutralisation of one—not alone as furnishing, from the similarity of treatment, a more accurate result, but also as being less tedious. The great difference observed between the amount of free, as compared with the combined or structural acid (sulphur?), is altogether beyond the range of error of experiment. Indeed, except in the case of the kidney (as above stated), I am satisfied that the results are a very close approximation to the truth. The purity of the reagents in such investigations is of the

* In another comparative experiment, 500 grs. of liver which had been previously dried, and again soaked in distilled water to restore it as far as possible to the state of recent tissue, gave, by the addition of alkaline carbonate, calcination, &c., 3.57 sulphate of barytes. The difference in this result from the above is, to a great extent, due to the tissue not having quite recovered its natural amount of water, and hence representing less than its proper weight.

† Poggendorff's Annalen, Bd. xl. Hft. 5.

utmost importance. I have found the bicarbonates of the most vaunted London makers, useless, from the presence of a notable quantity of sulphate. The formerly prepared bicarbonate of soda, in crystalline lumps, was exempt from the latter contamination.

From the above data the following inferences seem deducible:—

1. That in poisoning by sulphuric acid the poison may reach the interior of the larynx and bronchial tubes during life,* and may thus produce a bronchitis of sufficient intensity to prove fatal, either *per se*, or aided by mischief elsewhere.

2. That the blackening of the stomach in poisoning by sulphuric acid does not necessarily involve the carbonization of the tissue, but may consist in the interstitial deposit of blood effused under the corrosive and irritant action of the poison, and chemically altered by the latter.†

3. That oil of vitriol does not *carbonise* the dead stomach, but dissolves its coats.

4. That in cases of poisoning the acid may be detected in the blood and parenchymatous viscera;‡ its quantity relatively to the weight of structure operated on, being greatest in the *liver*; and, in proportion to that of the normal sulphates, in the *blood*.

5. That in the blood and parenchymatous organs, the acid is to be discovered (and probably exists during life) solely in combination with the colouring matter and tissue respectively.§

* In a remarkable case by Dr. Gull (MED. GAZ., June 28th, 1850), the acid appears to have entered the lungs *after death*. A case lately occurred in Dublin, in which death took place suddenly, after an illness of four hours, apparently from spasm of the glottis. It would appear that little of the acid reached the stomach, which presented slight inflammation near the cardia.

† About a grain of the mucous membrane (neutral to litmus) dissolved in pure nitric acid, gave a slight but distinct white precipitate by chloride of barium. The combination of sulphuric acid with hæmatosine is neutral. When it is sought to determine the presence of sulphuric acid in the tissue of the stomach, the comparative examination of equal weights, as above, should prove available.

‡ Mr. Scoffern (MED. GAZ., 1842, ii. 254) found the tissue of the kidney acid to litmus in a case of poisoning by sulphuric acid. This may have been due to *phosphoric acid*. Having adopted Devergie's method, his experiments are in no wise conclusive as to the presence of free sulphuric acid.

§ From overlooking this fact, appears to have originated Orfila's assertion (Traité de Toxicologie, 1843, t. i. 112), "qu'il est difficile, pour ne pas dire impossible, de constater la présence de

6. That the poison, when absorbed, decomposes the alkaline phosphate of the blood, and that the resulting sulphates are rapidly evolved.

7. That the above indicated method of comparative examination of equal weights, when carefully employed, appears suited to the exigencies of medico-legal practice, and is not open to any practical objection which cannot be obviated either directly, or by collateral proof.*

8. That researches relative to the distribution and state of combination of substances absorbed by the blood, afford a rational prospect of improvement in our knowledge of the action of therapeutic agents.

ON THE HISTOLOGICAL NERVOUS ELEMENTS IN ADHESIONS. BY HR. VIRSCHOW.

THE author observes that he had undertaken the examination of adhesions with the especial object of ascertaining whether nervous fibres were to be discovered in those structures. He had searched in vain a long time, but had at last twice succeeded in detecting them, by the addition of a solution of soda to the preparation. The first was in an adhesion that had been formed between the surface of the lung and the side of the thorax: here he had discovered two thick nerve-tubes running a parallel but perfectly distinct course, and following the direction of the elastic fibres. They presented a double contour: their contents were here and there aggregated, so as to impart a varicose aspect; their anastomoses were not perceptible: it was not possible to mistake them. The second occasion was in examining a flat adhesion from between the liver and diaphragm. The nerve-tubes had the same appearance as the above: they did not traverse the entire adhesion, but terminated by pointed ends at certain distances. A short distance before it divided it sent off a branch, which proceeded for about half a line and then terminated by a pointed extremity. In this case the nerve was clearly traced from the diaphragm. In both these cases numerous other adhesions were examined, without discovering any trace of nerve.—*Verhandlungen der Physikalisch-Medicinischen Gesellschaft in Würzburg*, 1850. X.

l'acide sulfurique dans le foie, et la rate des animaux empoisonnés."

* Such as the administration of alum during life: alumina should, in that case, be detected in the tissues.

CASES IN
CLINICAL MEDICINE.

BY DR. ROBERT MACGREGOR,
Junior Physician to the Royal Infirmary of
Glasgow.

Diabetes.

THOMAS CHAPMAN, æt. 21, gravedigger,
admitted 11th Nov., 1850.

Five months ago, without any assignable cause, patient began to pass unusually large quantities of water daily, and at very short intervals. At the same time he became affected with intense thirst and craving for food, which symptoms have continued ever since, and have gradually been on the increase. He had some medical treatment previous to admission. Has been losing flesh and strength; is at present very weak, considerably emaciated, and has an anxious expression of countenance. Has no pains in the renal regions, but has occasionally been troubled with a sense of weight in the stomach, vomiting immediately after meals, and acid eructations. At present the skin is dry, rough, and scaly, and on the left hip and lower part of back there is an eruption of small pustules on inflamed bases, which began to appear about a week ago, and were attended with considerable itching. Patient sometimes perspires slightly, but the perspiration is chiefly confined to the face. Tongue clean and moist; but the mouth and throat feel always dry and parched. Pulse 96; of ordinary strength and fulness. Bowels regular. Urine is pale, and amounted a fortnight ago to seventeen pints in the twenty-four hours. At present the specific gravity is 1040. It is very sweet to the taste. On the application of heat, after the addition of liquor potassæ, it assumes a deep brown colour. With the addition of sulphate of copper and liquor potassæ, a copious yellow precipitate is produced on the application of heat; and by evaporation it assumes the consistence of a thick syrup, while by yeast it ferments copiously, and affords a torula by spontaneous fermentation, which presents a well-formed vegetable-looking structure under the microscope.

Habeat balneum tepidum om. noct.

12th.—Has voided twenty pounds of urine in twenty-four hours, of a deeper

colour than yesterday, having an acid reaction and a sp. gr. of 1,045.—Cont. Baln. tepid, o.n. To have animal diet and gluten bread.

18th.—Complains much of diarrhœa to-day.—Hab. Enem. Opiat., bis in dies et Vini Rubri, ʒvj.

20th.—Diarrhœa restrained somewhat.—℞ Bisulphitis Ammonię Liquoris; Aquæ, aa ʒj.—Habeat cochleare parvum tertia quaq. hora ex aqua.

22nd.—Urine 28 lbs.—sp. gr. 1.038. Patient has been perspiring freely for the last two days. Complains much of pain over both hips, in which situations a number of small abscesses have formed, which are discharging large quantities of sanious, dark-coloured pus. Bowels still loose.—Augeatur dosis Bisulphitis Ammonię ad Cochleare medium.

24th.—Urine 21 lbs.—sp. gr. 1.033. The medicine nauseates slightly, and patient feels very weak.—Aug. Vinum ad ʒviij.

27th.—Abscesses are still forming over hip and upon the legs. Urine 20 lbs., and sp. gr. 1.035.—Habeat Solutionis Bisulphitis Ammonię fortioris Cochleare medium, ter in dies ex aqua.

Dec. 1st.—Back, hips, and legs, still covered with small boils. Patient perspires all over the body, with the exception of the legs. Urine 20 lbs.—sp. gr. 1.036.

5th.—No improvement. Abscesses still continue forming all over the body, and cause great uneasiness. Urine 25 lbs.—sp. gr. 1.036; faintly acid, and deposits prisms of triple phosphates.

9th.—Urine 22 lbs.—sp. gr. 1.040; muddy.

12th.—Urine 20 lbs.—sp. gr. 1.039; acid and clear, without any deposit. The perspiration has been examined by Mr. Perry, and given distinct and clear indications of the presence of sugar.

18th.—Cannot lie without pain in any position from the great number of abscesses in many parts of the body. Urine 18 lbs.—sp. gr. 1.038.

Feb. 14th.—Abscesses have all healed, with the exception of a large one above right knee-joint. Patient is beginning to regain some strength. Tongue clean; bowels regular; urine 12 lbs.—sp. gr. 1.037.

Habeat Solutionis Bisulphitis Ammon. ʒix. ind.

25th.—Urine 12 lbs.—sp. gr. 1.036. Appetite failing.—Hab. Olei Jecoris

Aselli Cochlear. magn. ter ind. et cont. Bisulph. Ammon.

March 1st.—Urine 10 lbs.—sp. gr. 1.038. Strength is improving.

16th.—Abscesses are all healed, and patient is now able to walk, though still very weak. Urine 10 lbs.—sp. gr. 1.032.

25th.—11 lbs.—sp. gr. 1.035. Deposits phosphates.

27th.—Aug. Bisulph. Ammon. ad 3xij. indies.

April 1st.—℞ Supercarbonatis Ammoniae, 3ij.; Aquæ 3xviij. s.—Habeat 3ij. sexies ind. et omit. Bisulph. Ammon.

8th.—Complains of medicine griping and causing pain in the stomach: add Mist Tinct. Opii, 3ij.

17th.—Urine, which came down to 3 lbs., is again up to 10 lbs.—sp. gr. 1.031. Patient's strength is daily improving.

18th.—Dismissed much improved.

Readmitted on the 28th April.

Health is considerably improved, but he still has intense thirst, though the appetite is not so voracious. Urine 12 lbs.—sp. gr. 1.029; contains a large quantity of sugar. Weight of patient 8st. 5lbs.—℞. Solut. Bisulphitis Calcis, 3ij.—Habeat 3ij. quater indies ex aqua et utatur dieta ut antea.

May 10th.—Urine 21 lbs.—sp. gr. 1.032. Omit. Bisulphas Calcis, et habeat Pil. Opii, ter indies.—℞ Bicarbon. Ammoniae, 3ss.; Aquæ, 1bj.; Syrupi Simplicis, 3j.—Sumat 3j. ter indies.

May 30th.—Urine 17 lbs.—sp. gr. 1.032; contains abundance of minute torula. Weight of patient 8st. 12lbs.—Augeatur Opium ad gr. v. indies. et habeat Olei Jecoris Aselli more solito.

June 25th.—Urine 15 lbs. General health of patient improved.—Aug. Opium ad grana viij. quotidie.

July 14th.—Much the same as at last report. Was dismissed somewhat relieved.

Hugh Masson, aged 27, hammerman, admitted 12th December, 1850.

About three weeks ago, without any assignable cause, began to experience intense thirst and inordinate craving for food, and about the same time he observed that he passed immoderate quantities of urine, and at short intervals; since then these symptoms have continued, and have been gradually on the increase. Has no dyspeptic symptoms, but a feeling of languor and debi-

lity. Has pains of a dull gnawing character in both lumbar regions, very little increased upon pressure, and most constant over the site of the kidneys. Bowels have been very loose for the last two days; stools are thin, and of a yellow colour. Skin dry and cool. Tongue whiteish, and dry at tip. Pulse 68, of natural strength and fulness. Urine is of a pale straw colour, having a very peculiar odour, a sp. gr. of 1.049, an acid reaction, and giving indications of the presence of a considerable quantity of sugar, on the addition of the usual tests for that substance.

Habeat Eysii Mollis, gr j., ter indies, et Solutionis Bisulphitis Ammoniae coch. parv quater ind. ex Aqua. Utatur diet. animal. et Pane Glutinis.*

14th.—Bowels not so loose. Urine, 14lbs.; sp. gr., 1.038, acid.

16th.—Has taken the Bisulph. of ammonia for two days. Urine, 20lbs.; sp. gr., 1.041.

20th.—Urine, 21lbs.; sp. gr., 1.033.

24th.—Complains of weakness. Hab. Vin. Rub. 3vj. ind.

27th.—Has for the last two days been perspiring freely over the upper half of the body. The sweat having been collected was examined, and gave very distinct indications of the presence of sugar on the application of the usual tests. Urine, 19lbs.; sp. gr., 1.035; reaction acid.

Jan. 1.—Complains much of pains in both renal regions, and of weakness in the back. Still perspires on head and shoulders; bowels regular; pulse clean; tongue clean; urine, 23lbs., sp. gr., 1.033; reaction acid, and contains a deposit which under the microscope is seen to consist of very large torulæ.

4th.—Urine, 14lbs.; sp. gr., 1.040.

8th.—Urine, 11lbs.; sp. gr., 1.038.

11th.—Has drunk 10lbs. of water within 24 hours. Urine, 11lbs.; sp. gr., 1.034.

Feb. 1st.—Urine, 17lbs.; sp. gr., 1.035. Habeat urinæ vaccinae, 3xij. ind.

6th.—Urine, 19lbs.; sp. gr., 1.031. Omit. Opium et aug urin. vaccin. ad 3xvj. ind.

14th.—Bowels very constipated; pa-

* The gluten bread in use is that prepared from wheaten flour, where the starch has been washed out, and not the gluten bread of potato fibre, which is said to be the best of the two.

tient feels himself becoming gradually weaker, and complains of pains in the loins when he walks. Urine, 15lbs; sp. gr., 1.040; cont. ur. vac. Hab. Pil. Coloc. co. ii. q. noct. et Cochleare Magnum Ol. Jecoris Aselli ter ind.

March 1st.—Has lost 7lbs. in weight during the last month. Urine, 13lbs.; sp. gr., 1.033.

11th.—Urine, 11lbs.; sp. gr., 1.040; drinks, 9lbs. Medicine has begun to nauseate, and patient frequently vomits. Dimin. dosis urin. vaccin. ad $\frac{3}{4}$ xij.

17th.—Urine, 9lbs.; sp. gr., 1.040; drinks, 8lbs.

27th.—Has lost three pounds in weight since this day of last month. Urine, 9lbs.; sp. gr., 1.037; drinks, 7lbs. Cont. Med.

April 6th.—Omit. urin. vaccin. Hab. Bisulphitis Calcis $\frac{3}{4}$ j., ter indies ex aq. On the 13th April he is dismissed improved.

I have entered the reports of these two cases of Diabetes Mellitus in full, with a view to show the progress of the disease, and the remedies employed. Both cases were improved, but there seemed to be no disposition towards a cure. Although I have seen scores of cases of this disease alleviated, yet I have never seen a cure. Chapman was bled not for relief, but with a view to ascertain the sp. gravity of the blood, which was 1.058. Upon the recommendation of Dr. Macfarlane of this city, who had seen cases of diabetes mellitus improved by the administration of cows' urine flavoured and coloured so as to disguise, that substance was administered in Mason's case, and pushed until it nauseated, and with some improvement. Dr. Macfarlane has had some cases treated by it in which there were apparent cures.* The bisulphite of lime, which was prepared by supersaturating lime or chalk suspended in water, with a stream of sulphurous acid gas derived from the action of heated sulphuric acid upon wood charcoal,† was administered in consequence of its suggestion by Professor Christison to Dr. A. D. Anderson of this city, in a private case. In that

* I had some thoughts of preparing hippuric acid upon a large scale, and of trying it, but it struck me that possibly it might be more serviceable in puris naturalibus.

† Also by saturating an aqueous solution of the sulphuric acid with carbonate of lime, always taking care that the liquor be in the end decidedly acid.

person's case the medicine has been continued in large doses for many months, and with apparent benefit. The patient considers himself quite well; though thinner than usual he attends to business; his strength he considers good. The daily amount of urine does not exceed 4 or 5 lbs., and his thirst and appetite are not abnormal. The sp. gr., however, of the urine is as high as 1.034 to 1.037, and now contains no excess of urea in addition to the sugar, as it did when I had occasion to examine it in early stage. The bisulphite of lime was thought of because of Professor Melsen's (of Brussels) patent for the refining of sugar. It consists in the use of bisulphite of lime, which is added to the juice of the cane or beet-root for the purpose of preventing fermentation, and of separating by coagulation most of the colouring and azotized principles which are always present. The solution of the bisulphite of lime is said to be a most effectual antiseptic, preventing the production and action of all ferments, and from its great avidity for oxygen it counteracts any tendency to oxidation in the juice to which it is added.

Considering that it acted so out of the body, it was supposed that it might be serviceable in obviating the production of sugar; and the conversion of starch and other alimentary substances into sugar, changes which are supposed and alleged to take place to such an abnormal extent in diabetes mellitus.

From the manifest benefit which accrues in the treatment of this disease by the use of nitrogenated diet and nitrogenated medicines, it occurred to me that the substitution of the bisulphate of ammonia might be an advantage. This was prepared by supersaturating the ordinary liquor ammoniæ with sulphurous acid gas, and by referring to Chapman's case will be observed the amount of temporary benefit resulting from its use. My own experience does not permit me to say that these medicines have much advantage over Bouchardat's plan of treatment. All of them do act, I think, in the same manner and upon the same principle as the antiquated hydro-sulphuret of ammonia did, viz., in all probability by their sedative effects upon the pneumogastric nerve. Mr. Bernard has observed, that if a slight wound be inflicted over the fourth ventricle of the

brain a little above the origin of the 8th pair (pneumogastric) which supplies the organs of digestion, the urine becomes charged with sugar, and is diabetic.

In the LONDON MEDICAL GAZETTE, May, 1837, I published a Memoir, being an Experimental Inquiry into Healthy and Diseased Urine. The conclusions appended to the inquiry I may re-insert here.

"From the preceding experiments, it may be inferred,

1st. That we know of no disease characterised by the absence of urea; though, in some, the quantity of it is, in common with some of the other ingredients, diminished.

2nd. That the quantity of urea is quite independent of that of the sugar in diabetes; the former increases, not by reason of the disappearance of the latter, but because the patient has been put upon liberal doses of animal diet, opium or some other palliative, which checks the excessive thirst, and thus concentrates the urine. In the case of the healthy individual, who was fed upon animal food and water exclusively for three days, the quantity of urea passed more than doubled the natural diurnal amount, showing that large quantities of animal food increase the urea proportionally. Opium has a similar effect, both in health and in diabetes. In the diabetic individual, who was similarly treated for three days, the urea crystallised readily on the addition of nitric acid, notwithstanding the presence of a large quantity of sugar.

3rd. That in diabetes, the quantity of urea is considerably increased in consequence of the greater quantity of food introduced into the stomach, either vegetable or animal. In the urine of the herbivorous, we have a goodly proportion of urea. In one specimen, that of a cow, I found 3·2 per cent. of urea.

4th. That the sugar is formed in the digestive organs, and that the kidney is a mere outlet in common with the other excretory organs of the body.

And, lastly, that it is readily discoverable in the blood, saliva, and stool of diabetic patients, and even in the blood of healthy persons who indulge in vegetables, and to this I add now that it was also readily discovered in the sweat of both Chapman and Mason.

The Reviewer of Prout, Bird, Alridge, and Bouchardat, in the Edinburgh Monthly Journal of Medical Science, for September, 1848, states "that one

of the most important results of recent investigations into the phenomena of digestion, is the establishment of the important fact, that the secretions poured into certain parts of the alimentary canal have the power of converting fecula or starch into glucose; a form of the saccharine principle identical with diabetic sugar. The saliva was indicated several years ago by Leuchs and Burdach, as the chief agent in the solution of the feculents, which they maintained were converted by it into sugar. M. Mialhe concluded that the saliva is the sole fluid which has the power of digesting the feculents; but this was shown to be incorrect by M. Bouchardat, who had previously, in January, 1845, read a memoir to the Academy, proving by experiments on animals that it is chiefly in the duodenum and small intestine that this change is effected. M. Bouchardat admits the accuracy of M. Mialhe's observations with respect to the saliva; but he has succeeded also in obtaining a *diastase* from the pancreatic fluid, and in proving that the fluid obtained by digesting the fresh pancreas in water has a strong reaction upon fluid starch. His experiments further show that crude fecula is but little affected either in the mouth or even in the stomach, the saliva not having the power of rupturing at once the external membrane of the starch vesicles, which, therefore remain in tact until they have remained a considerable time in the fluids of the alimentary canal. M. Bouchardat further established, negatively, that neither the bile nor the gastric fluid in its normal state of acidity, have the power of acting on the feculents; and he concludes, therefore, that in health the principal digestion of these substances takes place in the duodenum and small intestine, under the influence of the pancreatic fluid; and that it is only where the fecula forming the food of the animal has been previously cooked, that the fluids of the mouth have the power of acting on it.

Bernard and Barreswil find that the power above ascribed to the saliva and pancreatic fluid belongs also in a marked degree to the gastric secretion, provided the acid naturally existing in that secretion be neutralised by an alkaline carbonate; and conversely, that the saliva and pancreatic fluid, on being treated with an excess of acid, acquire the power, formerly supposed peculiar

to the gastric secretion, of dissolving and digesting the albuminous compounds. It would appear that with respect to the feculents and protein compounds, the three fluids above mentioned exert a common digestive power, which is modified in each by the circumstance of their acid or alkaline reaction. According to M. Bouchardat (who has made by far the most extensive and satisfactory series of observations on this disease of late years), diabetes is invariably dependent on an abnormal digestion of the feculents within the *stomach*, instead of lower down in the canal. This fundamental fact he has, we think, proved, not only by numerous observations on the contents of the stomach during digestion in diabetes as compared with healthy individuals, (which observations agree in the main with those of Dr. Macgregor); but by showing that the fluid from the empty stomach of diabetics has, even when acid, a power not possessed by the normal fluid, of converting starch into glucose. M. Bouchardat considers this peculiarity due to the presence of a diastase which is absent in the healthy stomach, and which is secreted there in virtue of a vicarious action, the pancreas being in his opinion incapable of performing its office in diabetes. This last point, the Reviewer remarks, is by no means well made out, depending chiefly on a single observation of diseased pancreas in connection with diabetes.

Bouchardat asserts that glucose forms in the stomach, escapes rapidly into the blood by the veins in quantities too great for secondary assimilation, and is thus eliminated through the kidneys. It has been lately advanced that the liver is endowed with a peculiar power of separating noxious or superfluous substances which enter the circulating system, and among these sugar has been named, and made the subject of experiment. The secondary assimilation has been accused of being at fault in this disease. Although much has been done by Christison, Prout, Bouchardat, Bird, &c., to unravel the pathology of this disease, our knowledge of it is very imperfect still; and though we can palliate it by animal food, gluten bread, opium, the hydrosulphuret of ammonia, carbonate or bisulphite of ammonia, bisulphite of lime, &c., and prolong life, yet I have never seen or met with a case of cure. All ages are

subject to it, the young as well as the middle-aged, the female as well as the male, townspeople and country people, and the spare as well as the corpulent. Yesterday only, I was consulted by a farmer from a distant part labouring under this disease, who weighed a year or two ago 18 stones: he is now losing flesh and strength rapidly, and ere many months are over may be but a living skeleton.

THE COMPARATIVE FECUNDITY OF THE BLACK AND WHITE RACES.

DR. E. M. PENDLETON, of Sparta, Geo., in an article on this subject, published in the Charleston Medical Journal, gives the following statements in proof that the whites are not more prolific than the blacks.

"By the recent census of Hancock Co., Ga., we have ascertained that there are 587 white females, between the ages of 20 and 40 years, which may be properly termed the child-bearing period of woman's life. There are, likewise, 1207 white children under ten years of age, being an average of 2.05 per cent. of children for each female. Of the blacks, including mulattoes, there are 986 women between 20 and 40, and 2392 children under ten, being 2.42 per cent. of children to the woman. We infer from this table, that the blacks are much better breeders than the whites; and, by consequence, the natural increase of the one race is as much larger than that of the other, as 2.42 is larger than 2.05. By what process of ratiocination can we maintain the hypothesis, that our negro females are for ever drenching themselves with nostrums, injurious to their health, and fatal to their offspring? One well authenticated table, like the above, is worth more as an argument, than all the plausible theories of the profoundest philosophers of the age."

He also shows, by an analysis of 2852 cases in his own practice (1822 of which were whites, and 1030 blacks) that the prevalence of diseases connected with sterility in females is greater among whites than blacks. "Of dysmenorrhœa, which is apt to induce incurable sterility, the ratio of blacks to whites, according to population, is 0.30 to 0.14, showing that the whites are subject to this disease more than two to one. Of menorrhagia, it is 0.16 to 0.10. Of prolapsus uteri, 0.26 to 0.09, nearly three to one. Of amenorrhœa, that disease in which conception is next to impossible, it is 0.23 to 0.09. Leucorrhœa, 0.11 to 0.06; and abortion, 0.40 to 0.51—showing the tendency to abortion larger in the black female than the white, while in every other disease it is the reverse."—*Boston Med. Journal.*

MEDICAL GAZETTE.

FRIDAY, AUGUST 22, 1851.

ALTHOUGH we do not profess to chronicle the details of the Proceedings of the PROVINCIAL MEDICAL and SURGICAL ASSOCIATION,—a task which we fairly leave to our worthy contemporary the Provincial Medical and Surgical Journal,—we cannot allow the recent celebration of the nineteenth anniversary of this useful Society to pass without a few remarks. The meeting at Brighton on the 13th and 14th inst. has, we believe, given satisfaction, not merely to those who were present and took a part in the proceedings, but to those who were absent: for it has clearly proved that a large and respectable body of the members of our profession may be easily brought together to discuss matters connected with the welfare of all,—whether physicians, surgeons, or apothecaries,—and with the progress and improvement of medical science. The meeting was attended by gentlemen from all parts of the country, who had thus an opportunity of exchanging notes with old friends, and of forming new acquaintances.

Dr. JENKS, who was called to the Chair, addressed the meeting in terms which were appropriate to the occasion. The state of Union Medical Practice, Professional Quackery, Medical Reform, and the Benevolent Fund of the Association, were the subjects on which he particularly dwelt.

In reference to the first,—namely, *Union Medical Practice*, there had been no improvement since the last meeting of the Association: indeed, as we have already announced in this journal, the Committee of the Convention of Poor Law Medical Officers have been compelled to suspend their proceedings, from

the want of support on the part of those who would have been benefited by the results of their labours. Dr Jenks very properly insisted, in accordance with the conclusion of the Committee, that there can be no redress “so long as the degrading and ill-paid appointments are not merely accepted, but made the objects of eager competition.” By this ruinous competition for Poor Law appointments, the real progress of the profession is seriously injured, and the Union Officers, by undertaking more than they can perform, share the guilt of neglecting the poor with the Boards of Guardians by whom they were appointed. By receiving less than a just reward for their services they degrade themselves, and damage not only the interests of their fellow-labourers with their own, but indirectly those of every practitioner in the kingdom. “The remedy for this debasing system of competition is chiefly in the hands of the Union Officers themselves; but much might be done by a Government acting upon public principles for the public good, and especially for the good of the indigent poor, who in the main are the greatest sufferers by these irregularities.”

The subject of Professional quackery, or *Irregular Medical Practice*, was brought before the meeting on the second day in the form of a report, by Drs. J. R. CORMACK, TUNSTALL, and RANKING. The conclusions at which the Committee arrived regarding homœopathy—the heresy to which their attention was chiefly directed, are subjoined:—

“1. That it is the opinion of this Association that homœopathy, as propounded by Hahnemann, and practised by his followers, is so utterly opposed to science and common sense, as well as so completely at variance with the Medical Profession, that it ought to be in no way or degree practised or countenanced by any regularly educated medical practitioner.—2. That homœopathic practitioners, through the press

the platform, and the pulpit, have endeavoured to heap contempt upon the practice of medicine and surgery, as followed by members of this Association and by the Profession at large.—3. That for these reasons it is derogatory to the honour of members of this Association to hold any kind of professional intercourse with homœopathic practitioners.—4. That there are three classes of practitioners who ought not to be members of this Association, viz., 1st, real homœopathic practitioners; 2nd, those who practise homœopathy in combination with other systems of treatment; and 3rd, those who, under various pretences, meet in consultation, or hold professional intercourse with those who practise homœopathy.—5. That a Committee of seven be appointed to frame laws in accordance with these resolutions, to be submitted to the next annual meeting of the Association.—6. That the thanks of the Association are eminently due, and are hereby given, to the Presidents and Fellows of the Royal Colleges of Physicians and Surgeons of Edinburgh for their determined stand against homœopathic delusions and impostures.—7. That the thanks of the Association are also due and are hereby given to the Universities of Edinburgh and St. Andrew's for their resolution to refuse their diplomas to practitioners in homœopathy; but the Association feels imperatively called on to express its disapproval of any school of medicine which retains amongst its teachers any one who holds homœopathic opinions.—8. That these resolutions be printed, and transmitted to all the medical licensing bodies and schools in the United Kingdom; and that they likewise be inserted in the *Times* newspaper, the *Morning Post*, the *North British Advertiser*, *Saunders' News Letter*, all the British and Irish medical periodicals, and in such other journals as the Council may sanction upon the recommendation of the branch associations. In proposing these resolutions for the adoption of the Association, your Committee are anxious to state, that they are actuated by a strong sense of the importance of the subject in relation both to humanity and morals. They most conscientiously believe that the countenance afforded to the form of charlatantry herein alluded to is detrimental to the true interests of the public, as it is subversive of that strict in-

tegrity which ought to characterise practitioners of medicine, and which has ever distinguished the profession in these kingdoms.

“JOHN ROSE CORMACK, M.D., Edin.
Fellow Royal Coll. Phys. Edin.
(of Putney).

“JAMES TUNSTALL, M.D. Edin (of Bath).

“W. H. RANKING, M.D., Cantab. (of Norwich).”

We need hardly observe, that the report was unanimously adopted by the meeting. In introducing it, Dr. Cormack selected especially for condemnation some homœopathic extracts from a sermon by a Rev. THOMAS EVEREST. Non-professional persons who take up these matters are generally extreme in their views, in proportion to their ignorance of medical science; and we should be inclined to deal more leniently than Dr. Cormack, with a man who treats that gross imposture—homœopathy, as “the medicine of love,” of reason, or of common sense! We would rather consign such persons to the care of Dr. Conolly than of Dr. Cormack. A mild and soothing regimen, with careful watching, would be more beneficial than the attempt to convince them that they are labouring under a delusion.

The Council have made the following report on the subject of *Medical Reform* :—

“*Medical Reform*. — This difficult question still remains unsettled, but the Council fervently hope that it is approaching a termination that may ultimately prove satisfactory to all parties. The present year has been distinguished by the Council of the College of Surgeons taking the lead of a highly conciliatory course of conduct, for which they deserve, and have received, a meed of praise from all parties in the Profession. This concession has very considerably lessened the obstacles which stood in the way of Medical Reform. There are, however, still some difficulties to be overcome, which require calm and careful consideration; but as all parties are now animated by an earnest desire that this long contention should cease, your Council cannot but look

forward to a final settlement of the question at no distant day.

"As soon as it was known that the Council of the College of Surgeons were prepared to yield so much, your Council communicated with many members of the Association and with the accredited Societies who had worked with them to obtain a legislative melioration of the Profession. The result of the consultation was, that it was deemed prudent by all parties to accept the proffered terms of the College, with some slight modifications. Your Council, therefore, thought it right to address the Secretary of State for the Home Department, and at the same time assured him that they felt gratified by the concessions which had been made by the College; they also reiterated the principles on which they considered any safe medical legislation should proceed."

The adoption of the Report was moved and seconded by Dr. Cormack and Dr. Forbes Winslow. An adverse amendment was moved but rejected by a large majority, and the original resolution was carried. We believe, that if we except a few disappointed or rejected grumblers, who have uniformly displayed a strong feeling of hostility against our Colleges, the profession throughout the country will substantially concur with the Association in the terms of their resolution on Medical Reform.

The Sixteenth Report of the Medical Benevolent Fund was read by Mr. Newnham. We have reprinted this Report at page 349 of the present number. It is in every respect worthy of the serious attention of those practitioners who have not hitherto subscribed to the fund.

We believe we have now narrated the principal topics which were brought before the meeting. As minor points, we may notice the condemnation of the income-tax, and the appointment of a committee to inquire into the bearing of taxation on the profession. With regard to that odious impost, which, in its principles of confiscation, is worthy of the Red Republic of France, we have

never been able to comprehend why a medical man in England and Scotland should be taxed four pounds ten shillings per annum on every one hundred and fifty pounds of income, while the Irish medical practitioner, receiving the same amount from practice, is altogether exempted. If Ireland is a poorer country, the income tax is so constructed as not to fall on the poorer classes. We dispute altogether the equity of the present mode of assessing income tax on the profession; but admitting that the necessities of the state require this Turkish method of levying money on a hard-worked and ill remunerated body of men, we concur with the speaker at the Brighton meeting (Dr. Smith, of Cheltenham,) that no practitioner in the empire, whether English, Scotch, or Irish, should be exempted from the tax so long as he receives an income which brings him within its operation. The present method of assessment in England and Scotland virtually leads to a higher payment on the part of English and Scotch practitioners, in order that their Irish brethren enjoying the same amount of professional income in a country where living is less costly, may escape the tax altogether!

Various other subjects, some of local and others of temporary interest, were discussed. Manchester was appointed to be the place of meeting for the year 1852; and the nineteenth anniversary of the Provincial Association was thus brought to a close amidst increased feelings of good will and friendship among its members.

THE Court of Examiners of the Apothecaries' Society, in their Report recently presented to the Master and Wardens of the Society, have made some remarks on the education and examination of candidates for their license, to which we think it desirable to give a prominent place in our columns.

The following extracts from the Report affect those gentlemen who are about to commence their studies in the Medical Schools of the Metropolis:—

“The Court regret to observe, that great ignorance of the Latin language has been the cause of a large portion of the entire rejections; a fact in relation to the preliminary education of medical students to which the Court beg leave to draw especial attention.

“The Court have much pleasure in reporting that their recent exertions in promoting the study of clinical medicine and practical chemistry have been attended with most beneficial results; as has been evinced by the marked improvement exhibited by many of the candidates in those important and indispensable branches of medical science.

“But the Court have long been of opinion that the great obstacle to the acquisition of sound medical knowledge is the general want of preliminary education among the pupils; and they are convinced that until this serious defect is removed, the progress of medical education will be retarded.

“The Court have, therefore, under the sanction of the master, wardens, and court of assistants, proposed to institute an examination in classics and mathematics for junior students, which is to be held for the first time on the 18th of October next.

“This examination is for the present voluntary, but its object is twofold:—First, to encourage in junior students the acquisition of such an amount of preliminary knowledge as will enable them to enter with advantage upon the extensive field of medical study; and secondly, to supersede the necessity of requiring from the candidate a technical acquaintance with medical Latin authors at the termination of his medical studies, instead of demanding a due amount of preliminary information at their commencement.

“HENRY BLATCH, *Secretary*.

“Apothecaries’ Hall, Aug., 1851.”

There can be no doubt that this is a step in the right direction; and we advise students to lose no time in preparing themselves for this preliminary examination.

Reviews.

Clinical Observations on Diseases of the Genito-Urinary Organs. Part I. *Gonorrhœa, and its Consequences.* By HENRY JAMES JOHNSON, formerly Lecturer on Anatomy and Physiology, and Senior Assistant-Surgeon to St. George’s Hospital. 8vo. pp. 358. London: Highley and Son. 1851.

IN these Clinical Observations, Mr. Johnson treats of gonorrhœa in the male, separately from that in the female, the latter forming only a very small portion of the work. The FORMS of Gonorrhœa are divided into—1. Acute or virulent; 2. Subacute, chronic, or mild; and 3. Gleet. These several forms are fully and well described; but as our readers are probably familiar therewith, we pass on to notice the author’s opinions of their SEAT. Mr. Johnson disposes of the popular notion that gonorrhœa depends upon ulceration within the urethra, and at the same time shows that a greater extent of mucous membrane is involved in the morbid action than is comprised by the fossa navicularis.

He enumerates the following CAUSES of the disease:—Contagion, menstrual secretion, leucorrhœa, or other discharges of the female; the natural secretions of some females under some circumstances (the last cause is suggested interrogatively as accounting for certain otherwise inexplicable cases which are related); local excitement or irritation, injury, &c; morbid constitutional states, gleet, (?) and sundry miscellaneous causes.

In discussing the first-mentioned cause—contagion—Mr. Johnson entirely disposes of the notion of the supposed identity of gonorrhœa and syphilis. In connection with this part of the subject, as probably accounting for the origin of this erroneous opinion, the author describes the syphilitic sore in the urethra. We quote the history of this affection as given by Mr. Johnson:—

“After exposure to infection, the patient presents, in due course of time, heat and pain in making water; discharge from the urethra; painful erections; and the ordinary symptoms of gonorrhœa. The pain in making water is not, however, so decidedly referred to the navicular fossa or the orifice, as in that complaint; and the

discharge is darker, and more inclined to be bloody. The remedies for gonorrhœa are unattended with benefit, and bubo perhaps appears. If no particular examination of the urethra is attempted, the case is treated as one of aggravated gonorrhœa, and most probably copaiba, eubebs, and injections, are resorted to, with the inevitable effect of aggravating the symptoms. If this course is persisted in, the corpus spongiosum may become extensively involved. Sooner or later, an eruption of the skin, with, probably, an ulcerated throat, reveals to the well-informed surgeon his mistake, or utterly confounds the bad one" (p. 20).

Several cases are related which illustrate the preceding observations, and dispose of the question of syphilitic gonorrhœa. Mr. Johnson in like manner illustrates his remarks upon the other causes of gonorrhœa by the narratives of cases, interesting in themselves and in their relation to the question of their origin. The idea of the possible production of this complaint by epidemic influences, worms, hæmorrhoids, accidental application of gonorrhœal matter, is briefly and effectively refuted by the author.

TREATMENT forms the natural sequence to the preceding topics; upon which, indeed, as the author observes,

"it is difficult to enter without some degree of embarrassment. The general plans and individual remedies in vogue at one time or another, have been almost as various as their authors. Each has been vaunted with a degree of confidence staggering to those whom experience has not often undeceived."

To collect and compare all these modes of treatment would be neither a pleasant nor a profitable task. Mr. Johnson confines himself to endeavouring to lay down principles in a simple and consistent form, bringing gonorrhœa within the pale of diseases which are to be rationally treated. The author enters very fully into the modes in which he endeavours to carry those principles into practice in the several forms of the disease, pointing out forcibly at the same time the evils of improper treatment, and graphically describing the difficulties to be met with in the management of the subjects of gonorrhœa. Upon every point connected with treatment, the reader will find the most ample advice and directions. We shall, however, do well to sum up the author's conclusions under

the head of Treatment in his own words:—

"Gonorrhœa, whatever its origin or nature, has for its essential feature inflammation of the urethral mucous membrane. This is analogous to inflammation of other mucous membranes.

"So long as the inflammation remains, it must be looked on in the same light, and treated on the same principles, as inflammation of similar tissues.

"The presence of inflammation is a bar to the use of 'specific' remedies, and of local stimulants.

"The period for their employment is that which precedes, and that which succeeds inflammation.

"The efficacy of 'specifics,' even with these restrictions, has been overrated; and local applications are those which exert the greatest influence.

"As local applications, those of a sedative and astringent character are, on the whole, the best.

"Strong, stimulating, and escharotic applications, are adapted to exceptional cases only, and even when appropriate are hazardous" (p. 104).

Mr. Johnson adds the following reflection:—

"To some, these conclusions may appear so obvious as to be almost truisms. Whatever may be said, they are anything but that in practice. Had I found them so, this work had not been written."

The author then cites the vaunted use of chloride of zinc, an escharotic substance, as an instance of the reckless treatment which he hereby seeks to assist in abrogating.

THE CONSEQUENCES AND COMPLICATIONS form the third and last heading under which the author discusses gonorrhœa in the male. Under this are included—Pain in the urethra unconnected with discharge, and the "irritable urethra," being a continuance of morbid action in the mucous membrane, originating in previous gonorrhœa. Secondly, those affections which result from the extension along a *continuous* tissue of the urethral inflammation—*e. g.* balanitis, phymosis, paraphimosis, verrucæ; erysipelatous inflammation of the penis and scrotum; diffuse inflammation of the dartos; inflammation of the lacunæ; retrocession of the inflammation to the posterior parts of the urethra, prostate, kidneys, bladder, and testis. Thirdly, where the inflam-

mation spreads to contiguous tissues—*e. g.* inflammation of the corpus spongiosum; of the absorbents of the penis; bubo; inflammation of the cellular tissue of the perineum. Lastly, the remote consequences, stricture and affections of the prostate and bladder.

We consider Mr. Johnson's remarks with regard to the treatment of all these affections to be of great practical value, consonant with the soundest principles of medicine and surgery, and founded upon extensive experience.

We refer to the author's account of the "Irritable Urethra,"—a condition which, so far as he is aware, has not attracted the notice of surgical writers, nor of surgeons themselves. The subject of the affection is invariably a person of nervous temperament, usually dyspeptic, and generally of a gouty habit. This condition of the urethra, the author states, is recognized with ease by the experienced eye. Its characters are described by the author, and appear to be allied to those of gleet, with the addition of neuralgic pains and constitutional derangement. To the latter point the remedies must be directed.

In speaking of phymosis, Mr. Johnson discusses at considerable length the operation of dividing the prepuce, which, "simple as it is, the ingenuity of surgeons has discovered one good way of performing, and two bad ones:" the right method being to divide the prepuce on its superior aspect from the orifice to the reflection behind the corona. The manner of performing this operation is minutely described by Mr. Johnson, who tells us that there is no operation in surgery that he has performed so frequently as this.

Passing by the author's remarks upon verrucæ; erythematic and erysipelatous inflammation of the integuments of the penis and scrotum; diffuse inflammation of the dartos; herpes and eczema of the prepuce; and inflammation of the lacunæ;—we come to inflammation of the vas deferens and testis. Here the author strenuously enforces the importance of active antiphlogistic treatment, and scouts the idea of strapping the organs. It is strange that such opposite opinions should be advanced upon a plain fact; for assuredly we ourselves have seen great and marked benefit quickly experienced by the use of this plan.

In treating of the subject of Bubo,

Mr. Johnson very carefully discriminates its varieties and modifications as produced by morbid conditions of the constitution.

We may commend to our readers' notice the author's judicious reflections upon the employment of venesection in gonorrhœal ophthalmia. Here, as elsewhere in the perusal of this work, we have been struck with the author's judiciousness and tact in the employment of remedies, and with the extent and soundness of his pathological views.

Mr. Johnson appears to regard what is called gonorrhœal rheumatism as a form of rheumatic gout coincident with gonorrhœa. He gives his reasons for his opinion, as well as a strong protest against the indiscriminate employment of colchicum.

Comparatively a very short space is allotted to the consideration of gonorrhœa in the female; but in that short space the author offers some very notable and valuable remarks upon the use and abuse of the speculum. We quote the following remark with reference to this point as well deserving of notice:—

"The vagina presents a very distinct epithelium, which ends by a sort of serrated edge within the uterine orifice. This is worth recollecting; for, on more than one occasion, I have seen the abrupt cessation of the cuticle give rise to the opinion that there was ulceration of the os uteri: in fact, I am convinced that the mistake is a common one. Everybody undertakes an examination quite as a matter of course; but everybody is, unfortunately, not a profound anatomist. I am sorry to say that one's experience is rich in too many instances of ignorance and of imposture; and that uterine complaints are the *el dorado* of quackery" (p. 327).

The author asserts his belief that the advantages of the speculum have been overrated, and its application abused. He has only found two or three instances of venereal sores high up in the vagina, or on the mouth of the uterus, in all the women examined at the Lock Hospital during one twelvemonth. Notwithstanding that Mr. Johnson admits that there is little difficulty in ascertaining the source of discharges without the speculum, and that treatment is not influenced by its employment, yet he advises its use, and gives directions for the manner of its introduction.

Having now run over the contents of this work, we may, in a few words, ex-

press our estimate of its character. Its prominent features are—the completeness with which the author discusses every topic that comes under his notice; the scientific application of pathological principles in the consideration of the nature and treatment of all forms of the disease; its essentially practical value, despite the author's repudiation of the character of a "practical man;" and, lastly, the graces of style and composition which it exhibits,—a rare quality in medical works.

In committing this first volume of a series to our readers' attention, we hope soon to have the agreeable task of introducing to their notice the author's succeeding works on Stricture, and on Diseases of the Prostate and Bladder.

Hand-Book of Natural Philosophy and Astronomy. By DIONYSIUS LARDNER, D.C.L., formerly Professor of Natural Philosophy and Astronomy in University College, London. FIRST COURSE.—*Mechanics, Hydrostatics, Hydraulics, Pneumatics, Sound, Optics.* With upwards of 400 illustrations. 8vo. pp. 824. London: Taylor, Walton, and Maberly. 1851.

THE fact that the University of London, the Royal College of Surgeons, and more recently the Apothecaries' Society, have concurred in enforcing a preliminary education on the part of candidates for their diplomas, renders the appearance of the work before us of some interest to all who propose to commence their studies in the ensuing session. Dr. Lardner is well known by his writings on various branches of physical science; he has had some experience in teaching; he is acquainted with the requirements of the profession, and he is therefore well calculated to be the author of a Hand-Book of Natural Philosophy. As we have copied the title in full, we have prepared the reader for its contents; we shall only remark that in treating the various subjects, Dr. Lardner adopts a judicious style. The paragraphs are short and distinct, each has its special heading in italics, and the language is clear and free from pedantry. Our examination of the work leads us to speak most favourably of it as a Hand-Book for students. We have been particularly pleased with the sections on the *Mechanical Properties of Liquids* and

Optics. As a general rule, we find all subjects brought up to the present level of science, although some are necessarily treated with great conciseness. The author introduces in many parts of the work paragraphs comprising physiological physics, or the application of physics to the structure and function of the body. The laws of mechanics are exemplified in the skeleton, and those of hydrostatic pressure in the circulation of the blood. These additions render the volume of great value to the medical student.

In treating of the transmission of pressure by water as a telegraphic agent (page 310), the author does not notice the ingenious apparatus for measuring velocity which is now in use in large sea-going steamers. In this, a column of water rises in a tube which goes through the bottom of the vessel into the sea. The height of the column is increased by the velocity; it presses on an enclosed column of air which acts on a surface of mercury. The mercury rises in a glass tube, and marks off five, six, or twelve knots an hour, according to the speed of the vessel. We lately had an opportunity of watching this ingenious piece of apparatus in action on board of a Jersey steam vessel.

We consider this to be a most useful and well-conceived work; and if the second volume, which is announced to have for its subjects *Heat, Electricity, Magnetism, and Astronomy*, be executed with the same care and with an equally judicious selection of materials, it is our opinion that the Hand-Book will be a useful addition to the library of every medical student, as well as a serviceable guide to all who are about to commence the study of physics.

Brighton and its Sanative Resources: comprising a special reference to the German Spa; Observations on Artificial Mineral Waters, Bathing, and Sea-Baths. By EDWIN LEE, author of the "Baths of Germany," &c. Small 8vo. pp. 120. London: Churchill. 1851.

ON the whole we see little in this production whereon to congratulate either the author or his readers.

The First Step in Chemistry. By ROBERT GALLOWAY, F.C.S., Lecturer on Chemistry, Putney College, &c. 12mo. pp. 91. London: Churchill. 1851.

THIS work is intended for the use of schools, or for the purposes of self-instruction; its author herein proposes to teach the first principles of the science in a series of progressive exercises, by which the student is made familiar with chemical nomenclature, the laws of combination, the mode expressing chemical changes, &c. &c. The execution of the work is as good as its intention. Having looked it through very carefully, we feel assured that it will be found of the greatest assistance to the student who by sufficient diligence shall make himself master of the information it affords. It will give him a very good insight into the science of chemistry, and efficiently prepare him for the further prosecution of its study should he be so disposed.

Was the Roman Army provided with any Medical Officers? By J. Y. SIMPSON, M.D., F.R.S.E., President of the Royal College of Physicians of Edinburgh, &c., &c. Pampl. 8vo., pp. 18. Edinburgh: Sutherland. 1851.

THIS inquiry Dr. Simpson follows out in a very interesting paper, by quotations from various classical authors, but finds neither in Celsus, nor in Paulus Egineta, nor in any other ancient medical work, any allusion to the circumstance of surgeons or physicians being regularly appointed as army medical officers in the Roman army. Some modern discoveries, however, in Great Britain and elsewhere, show the probability that common experience suggested to the Romans the advantages to be gained by having medical men to watch over the health of the soldiers that were fighting in so many different regions under their banners.

In the pamphlet before us, Dr. Simpson describes a tablet discovered at Housesteads, in Northumberland (the ancient Borcovicus), one of the principal stations on the great defensive wall, reared in the second century by the Emperor Hadrian. From this monument, which was raised by his companions "to Anicius Ingenuus, Physician in Ordinary of Cohort the first of the Tungrians," we learn that more than one medical officer was attached to each

cohort. Further evidence is also adduced by Dr. Simpson, rendering it probable that there were superior medical officers placed over the staff of the legions.

This pamphlet is altogether a most interesting and valuable historical contribution to medical literature. The author's erudition and antiquarian research have here, as on other occasions, been profitably directed, and have shed some lustre upon the presidential office which he holds, and which he thus dignifies in holding.

Miss Martineau and her Master. By J. STEVENSON BUSHNAN, M.D., Physician to the Metropolitan Free Hospital, &c. &c. Small 8vo. pp. 173. London: Churchill. 1851.

WE have fully exposed to our readers the odious character and tendency of the "Letters on the Laws of Man's Nature and Development," by Miss Martineau and H. G. Atkinson: it will not be necessary that we should bestow further consideration upon that production. If the public were to become acquainted with that work only through the pages of respectable journals, little fear need be entertained of its obtaining many readers, since one and all have exposed its errors and refuted the fallacies with which it abounds. As, however, some copies of the work may find their way into the hands of those who may not have access to medical journals, we would recommend the perusal of Dr. Bushnan's work, which takes up all the dogmas, assertions, and inferences of these two atheists, and by subjecting these to the ordeal of the crucible of logic in the furnace of truth, utterly destroys every atom of vitality that they may appear to possess, and leaves only the ashes of a dead feeble simulation of science.

ADULTERATION OF ARTICLES OF FOOD.

FROM a return lately issued an account is given of seizures and prosecutions by the Excise of adulterated tea, tobacco, pepper, and coffee. In the year ending the 5th of January last there were 1 seizure of tea and 1 prosecution, of tobacco there were 17 seizures and 13 prosecutions, of pepper 7 seizures and 23 prosecutions. No seizure or prosecution for adulterated coffee by the Excise in the same period.

Hospital and Infirmary Reports.

CLINIQUE DES DEPARTEMENS.

Traumatic Tetanus successfully treated by Frictions with Chloroform. By Dr. MORISSEAU, Physician to the District Hospital at La Fleche (Barthe).

THE patient was about forty years old, a man of good constitution. Eight days before admission he had slightly wounded himself on the front of his leg, while at work, with his pick-axe. The trifling wound had healed by the fifth day. On the sixth day tetanic symptoms manifested themselves.

The patient was at first treated at home, but the disease advancing he was removed to the hospital. When first seen by Dr. Morisseau the tetanus was fully developed; there was persistent contraction of the muscles of the jaw, of the chest, abdomen, and back; the body was bent double every hour; deglutition impossible. The pulse small and slow; nothing particular was observable of other functions.

Friction was performed with four grammes (one drachm) of chloroform. This quantity was repeated three times during the day. The patient was placed in an acidulated vapour bath.

On the following day a considerable improvement had taken place. The patient had perspired freely; he had slept well, which he had not done before, since the commencement of the attack. He had swallowed a few spoonfuls of liquid; the muscles were less rigid; convulsions shorter and less frequent.

The dose of chloroform was increased to twenty grammes, three times a day. This treatment was continued for five days with the best results; all the symptoms had disappeared on the sixth day. A sense of lassitude and debility alone remained, and these soon disappeared under suitable diet.

The Editor of *L'Union Médicale* adds to the above, the following, taken from the *Gazetta Medica Lombarda*:—A labourer, twenty-eight years of age, was seized with tetanus two days after having lain on damp ground whilst he was in a perspiration. The patient was immediately subjected to the treatment usually adopted there, and which consists in frequent venesection. He was bled eight times in four days, once to the amount of twenty ounces; about a hundred leeches were applied to the parts that were painful, and other ordinary means were adopted. On the sixth day the patient was in a very serious state,

when M. Tibaldi had recourse to frictions with ether in order to calm the muscular contractions. Two frictions were practised on the loins; venesection, and half a grain of acetate of morphia was given. Wherever friction was applied the action of the muscles was moderated. On the following day another bleeding to ten ounces, and frictions with ether on the neck and back. On the third day of this treatment the patient could sit upright. In two or three days more the patient was convalescent.

VAL-DE-GRACE.

A Doubtful Case of Chronic Glanders in the Human Subject. Under the care of M. LEVY.

L. S., twenty-six years of age, of a strong constitution, fair complexion, chestnut hair,—a groom: stated that more than a year ago he had been engaged in dressing an ulcerated swelling on the foot of a horse. He had soon after been admitted into a hospital for intermittent fever, and had been discharged as cured, but had suffered a relapse in about three weeks afterwards. He had experienced frequent relapses subsequently, and had been in hospitals and submitted to treatment by quinine. Towards Midsummer 1849 his health was so far improved that he rejoined the regiment to which he had been attached. In November of the same year he perceived a swelling in the region of the nape of the neck; the tumour had gradually increased in size. On the first of January, 1850, the patient was attacked with pains in his joints, rigors, sleeplessness, loss of appetite, and thirst. Several circular violet-coloured spots appeared on his legs and arms on the following day. His strength was completely lost; and on the 21st of January he was admitted under the care of M. Levy. At this time he presented the following symptoms:—

His face was pale; countenance rather heavy; pulse 80; pains in the limbs, with diminution of strength; emaciation; pain on the left side of the thorax, increased by percussion; spleen considerably enlarged; respiration free; no cough; the skin studded with violet-coloured spots, most abundant on the posterior aspect of the trunk and thighs. These spots consisted of flattened tumours, slightly elevated above the skin. On the face, above the eyebrows, and on the left cheek, these spots were more prominent. On the internal aspect of the left thigh there was a tumour of the size of a small nut, of a reddish copper colour, prominent and pointed. On the nape of the neck there existed a large tumour, soft, and without any discolouration of the integu-

ments. There was considerable enlargement of the glands in the inguinal, also in the parotidian and in the sub-maxillary regions.

23d.—The pulse 90; the number of the spots augmented. An incision made into the tumour of the neck gave issue to blood alone.

25th.—Sleepless; pain severe in left shoulder; pulse 80; slight epistaxis; glandular swellings augmented.

27th.—Sleeplessness continued; pain in the forearm, with appearance of new spots: was taking iodide of potassium.

28th.—The colour of the spots has changed to greenish and reddish-brown: epistaxis occurred again.

31st.—The principal tumours beginning to be absorbed: the pain centred in the left shoulder.

Feb. 1st.—Violent pain in the lower extremities, more particularly on the trochanter and outer side of the left thigh; sleeplessness and profuse perspiration. The iodide to be suspended.

3d.—Vomiting occurred during the night; cough; pain in left side of chest; the tumours diminished.

10th.—The spots and tumours have all disappeared; considerable swelling about the left clavicle; the body generally much emaciated.

13th.—Swelling on the left thigh; diarrhoea; vomiting.

14th.—Rigors and subsultus; diarrhoea and vomiting.

17th.—Pressure on the right thigh causes pain.

21st.—Swelling of the left cheek, of the glands of the neck on both sides, and of the mastoid attachment of the sternum: had passed four bloody stools.

March 5th.—Every symptom worse, and the patient died this day.

Autopsy thirty hours after death.—LYMPHATIC SYSTEM.—The glands of the neck and axilla were congested, as were those also of the groin in a less degree; they were of a reddish hue and friable. RESPIRATORY AND CIRCULATORY SYSTEMS.—The mucous membrane of the nostrils, fauces, and trachea, of a pale hue. The pulmonary structure was crepitant, except posteriorly, where there were portions of extravasated blood. The heart was flaccid, and contained fibrinous concretions in its auricles. DIGESTIVE APPARATUS.—The mucous membrane was pale. This organ contained only films of mucus: some slight erosions were noticed at its larger end. The lower half of the jejunum was of a red colour, which in the ileum was deeper still. The valvulae conniventes appeared to be covered with hypertrophied epithelium.

Near the iliac valve were deep ulcerations. Numerous ulcerations also in the large intestines. The coats of the intestines were thickened by infiltration. Adhesions existed between the peritoneal surfaces of the folds of intestines. The *spleen* was compact in structure, and of a deep black colour. The *liver* rather enlarged, of an orange yellow colour, of a granulated texture. The other organs healthy. The nervous centres presented nothing abnormal. OSSEOUS SYSTEM.—Yellowish pus was found in the left sterno-clavicular articulation, with absorption of the cartilage and osseous lamina. The clavicle at its sternal extremity was infiltrated with pus. The middle third of the left femur was surrounded by recent exostoses, which were still soft and semi-cartilaginous. Two small abscesses existed in the bone. Necrosis of the internal surface of the bone was taking place. The right femur exhibited similar morbid changes less advanced. The medullary canal of the humerus was filled with greenish pus, without any indications of necrosis.

The consideration of all the features of this case led to the conclusion that the intermittent fever did not owe its origin to malaria, but to the same animal poison which, introduced into the system, had produced a succession of symptoms identical with those of chronic glanders.

Medical Trials and Inquests.

OXFORD CIRCUIT, GLOUCESTER.

August 14.

ACTION ON THE PART OF AN ALLEGED LUNATIC TO ESTABLISH HIS SANITY.

The Queen v. Loveday.

THIS was rather an unusual proceeding. Last March the defendant was found a lunatic on a commission *de lunatico inquirendo* before a jury and one of the Masters in Lunacy. When this finding was returned into the Petty Bag-office the defendant prayed over of it, and traversed, or, in popular language, denied the truth of it, pleading that he was at the time of the taking of it, and at the date of the plea, of sound mind. To this the Attorney-General, on behalf of the Crown, replied that he was, and is, of unsound mind. On this issue was joined.

Mr. Serjeant Allen and Mr. Gray appeared for the Crown, and Mr. Keating and Mr. Pigot appeared for the defendant.

Mr. Pigot claimed the right to begin, on the ground that if he did not give evidence to disturb the finding on the inquisition,

it would stand, and there would be judgment for the Crown.

Mr. Serjeant Allen said this was like coroners' and other inquisitions, on which it was always the duty of those who sought to support them to begin.

His Lordship doubted how the question ought to be decided, and went and consulted with Mr. Baron Martin, who said, that he had always known the appellant to begin in such cases, and on his return he ruled accordingly that Mr. Pigot should begin.

Some consultation took place then in court between the counsel, and afterwards in the judges' private room, where his Lordship was present, and after some time it was stated by Mr. Serjeant Allen in court, that he, on the part of the petitioner, would admit that whatever might have been the appellant's state of mind at the time of the taking of the inquisition he was now of sound mind.

His Lordship told the jury that the case had been very properly arranged, and he thought the costs of the petition ought to be allowed out of the appellant's estate.

A verdict for the appellant was then taken.

IMPORTANCE OF POST-MORTEM EXAMINATIONS IN CASES OF SUDDEN DEATH.

ON the 7th instant, an inquest was held at Bishopsteignton, Devonshire, on the body of a young lady, Miss Jane Emily Wyse, who was found dead in her room at the house of Mr. and Mrs. Hele, on her return from an archery meeting, as long ago as the 14th of May last. On the day after her death the coroner attended and made inquiries, when Mr. Gors, a surgeon, having stated his opinion to be that *the young lady died in a fit*, it was thought necessary to hold an inquest. Since that time suspicions having arisen that she died from the effects of poison, and her uncle, Major Ellison, of Boulton Hall, Lincolnshire, having written a letter to Mr. Hele declining to receive that gentlemen and his lady as visitors to his house, Mr. Hele, to remove any suspicions, thought it desirable that an inquest should be held. The body was consequently exhumed, and Mr. Herapath, of Bristol, employed at the investigation before the coroner's jury. Mr. Herapath gave it as his opinion that the death of the young lady was occasioned by prussic acid. Witnesses were examined to show that she had been in the habit of using essential oil of almonds, and a letter, which was found in her desk after her decease, put in evidence, in which were the words, "I have thought it not improbable

that I might die suddenly," and requesting certain trifles to be distributed to her friends. The jury returned a verdict that she came to her death by taking essential oil of almonds, but whether with the intention of putting an end to her life or not they could not say.

* * * This case is interesting in several points of view. Medical men who have not attended a deceased person, and have not made a post-mortem examination, should be careful how they assign death to "a fit." A person may die in a fit from the effects of prussic acid or strychnia. Suicide or murder must be necessarily concealed, where such hasty opinions are given; and the registration of the cause of death becomes really a farce. The case further shows that essential oil of almonds may be discovered in the dead body so long as three months after death. The verdict is equivocal. The deceased may have been in the habit of *using* essential oil of almonds, but for what purpose could a large and fatal dose of it have been *swallowed*, except for that of suicide, to which also the written memorandum points?

Correspondence.

ON THE USE OF THE LATIN LANGUAGE IN THE HARVEIAN ORATION OF THE ROYAL COLLEGE OF PHYSICIANS.

SIR,—The following correspondence between a friend and myself I submit to you, in order that if you think it likely to be useful it may appear in your journal.

I am, sir,

Your obedient servant,

JOHN SPURGIN.

Guildford Street,
9th August, 1851.

MY DEAR SIR,—I was pleased to see by the papers that you had delivered the Harveian Oration, and I feel much indebted to you for the copy you have sent me. Had it been in French, Italian, or German, I could have read it easily, but my knowledge of Greek and Latin, at one time respectable, has gradually declined from disuse, and I no longer read either without a considerable effort. But do you not think that it would be much better to compose such orations in English? The

great object being to be clearly understood, there can be no doubt that the writer would express himself, and his audience understand him better in English than in Latin. With all respect, therefore, for the learned College, I must say that there seems to me to be a little pedantry in this use of a dead language, when a living one would answer the purposes so much better. I am quite aware that a physician ought to be able to read Latin with facility, and that his knowledge of that language should be ascertained before he obtains his diploma, but it does not follow that he should either speak or write it now that several modern languages contain far more information on medical subjects, and are in every respect better suited for his purpose.

In this it is very possible that you will not agree with me, but whether you do or not I shall always be

Yours most truly,
J. R.

1st August, 1851,

MY DEAR SIR,—Prior to my taking the duty to which your favour refers, in the way of comment on the language employed in performing it, I thought as you do, but as I proceeded with the task I perceived I was in error, and this on several grounds. In the first place Harvey's bequest renders it imperative; his reasons for it are as good now as they were in his day to be reasons at all, and of the number I must adduce as follows. Our College has to maintain the dignity and learning of the profession. It accordingly examines the candidates for its honours and privileges, which are to be attained only by classical and professional qualifications; to be capable of examination, it should surely give proof of its competency, and to this end the early attainments of its fellows ought to be maintained, and a stimulus should be perpetuated for keeping up those early acquisitions. The junior fellow knows that a certain duty will devolve upon him; if he respects the honour of his College he will keep the coming duty in view, and so be well prepared for it. If an attainment is useful at one time it is so at all times, especially where a high standing is merited only on high qualifications; the eminence of the utility of the Latin is conspicuous from its evincing mental industry, capability, and acquirement; and, if we add to this the fact of no language being so definite, so expressive, so fundamental in its meaning, we can discern the importance of its study to those more especially whose career attempts at truths which lie beneath the surface of things, and therefore require definite words for their correct expression.

The living languages you quote derive much of their life from the Greek and Latin, these being "dead" only to those who are ignorant of them; it is too much the practice to regard these languages as positively "dead," when they are only relatively so. Would that a multitude of our English words could be restored to the sense they at first conveyed, or the sense to them! they would no longer be the vehicles of serious fallacies nor of indefinite meanings which in reality convey neither sense nor knowledge, instances of which I almost fear to give lest they should engender the strife of argument; but in my profession, in the living English language, more indefinite terms are employed than are befitting its importance, and more liberties are taken with common sense than good common sense is aware of. Irritation, vitality, vital contractility, debility, and such like words, are used at random, and not a few who have employed them would, if they were hard pressed for their definition, be glad of finding a door to retreat by. But the day is coming for a better test of competency than is supplied by merely indefinite terms; the laws of nature are coming beautifully out; the largest reasons with the utmost harmony are found to prevail amongst them; they are nevertheless severe to the truth, for order the most certain and definite reigns throughout. They consequently require a language correspondent to give them adequate expression, and that will at the same time correct the wrong ideas which the wrong bias of human nature may have imperceptibly attached to them.

For my own part I regard the preservation of the Greek and Latin languages as truly providential, and I believe that by their instrumentality the human mind will be disabused of many an error, and corrected of much misapprehension. Here, therefore, we are greatly at issue about the justness of the charge of "pedantry" against our College for the use of a dead language, when a "living one" would answer its purpose so much better." The latter clause is an opinion rather extensively prevailing, but the former has been expressed to me only by yourself, and of this only am I anxious, for the honour of our College, to relieve you, because all that characterises the gentleman it has been my happiness to experience in you through a long series of years, and it was for no pedantic object that a copy of the late Harveian Oration was forwarded to you from,

My dear sir,
Yours very faithfully,
J. SPURGIN.

August 2d, 1851.

Medical Intelligence.

SIXTEENTH ANNUAL REPORT OF THE MEDICAL BENEVOLENT FUND.

ANOTHER year has passed away; and in again addressing their subscribers, your Committee have cause to congratulate you upon your progress towards maturity, and upon the development of your resources.

Notwithstanding the many unfavourable circumstances which have operated against your enlarged efforts, your Committee have to notice as chief causes of thankfulness, first, the success of their plan in altering their place of meeting to London; next, the harmony and efficiency with which their deliberations have been conducted; thirdly, the amount of misery they have been enabled to relieve;—and fourthly, the enlargement of their income.

Notwithstanding the severe pressure upon professional resources, arising from agricultural distress,—and the loss of many of their subscribers from death, or changed private circumstances, your Committee rejoice to announce that their income for the year ending June 30, has been £540. 1s. 4d.,—exceeding that of last year by nearly £50.

The amount of donations has been lessened:—this, however, was to be expected, as the preceding year had been one of special appeal: yet £188. 15s. 6d. have been received—and the amount invested in Bank Stock has been £214. 14s. 6d.,—thus making your permanent fund £1200 in Bank Stock, which at the present price of that stock, only produces £2,568.

Your Committee would further congratulate you, on the commencement of their annuity scheme. Four annuities have been granted during the last year, and two half-years have been paid, amounting to £75:—the extension of this part of their plan must depend upon the zeal with which they are supported:—but they hope to be enabled by your liberality to enlarge this mode of relief from your fixed or permanent income.

One of the circumstances which has operated against the prosperity of your Institution, has been the activity and zeal with which the British Medical Fund has been advocated, and pressed upon professional attention by the exertions of its valuable Secretary.

Yet your Committee, so far from undervaluing the British Medical Fund, do consider it as an instrument of great usefulness. When it is recollected, that medical men are generally poor,—that they marry early upon insufficient incomes,—and that

the value of their lives is very much below the annual value of life in the other professions, *cæteris paribus*, it will follow as a matter of duty, that each individual should lay by him in store, for the event of sickness,—for the contingencies of after life,—and for the certainty of death,—that upon the occurrence of this last event, his family may not be dependent upon charitable relief. To such thoughtful individuals, the British Medical Fund offers greater advantages than can be afforded by any ordinary insurance society—and it is restricted to members of the Medical profession.

Facts however have shown, and have especially shown in the last year, that no providence in the earlier part of life,—no primary success,—no splendid standing in the profession,—no large income, can secure either themselves or their descendants from the reverses of calamity or from the dire approach of want. Facts have proved, as will be shown by a reference to the list of cases relieved, that no early prosperity can exempt a man or his family from the probability of future distress; and while these facts should warn us of the importance of making provision for the future, and should inculcate upon every one a lesson of humanity and prudence, they should still more deeply awaken the noble and Christian sentiment of sympathy and active benevolence towards our brethren in their hour of need; “let those who have much, give of their abundance; let those who have little, give gladly of that little,—and assuredly they shall not lose their reward.”

If there be one conclusion more than another to be arrived at during the history of the last year, it is this,—that the existence of a purely charitable fund is indispensable for the relief of a great mass of professional misery, which is *unrelieved* and *unrelievable* by all the Provident Institutions combined; and therefore, the necessity for the existence of the “Medical Benevolent Fund” becomes every day more and more apparent.

While, then, your Committee would earnestly intreat practitioners everywhere to insure their own lives, as a duty which they owe to their families, to the profession, and to society at large, they would also point out the advantages of your own fund, as offering a measure of relief to those who have been unable to effect or to continue this provision; and they invite your especial attention to the *simplicity of its object*, and the *efficiency of its working*.

Its object is simple;—the immediate offspring of that Christian charity, which forms the chief ornament of its character:—it originates in the heart, and it seeks its way to the heart of the distressed. A

reference to the cases appended to this report, will show, that it requires not any special qualification; but extends its immediate aid to distress, provided that such has not been the consequence of immoral habits.

But it is also efficient in its working: relief has been afforded during the last year to forty-six applicants, at a cost of £464. 2s. 6d. besides the sum of £75 paid to annuitants, making a total of benevolent aid during the year of £539. 2s. 6d. The relief thus given has not only been efficient, but it has also been discriminating; the cases have been minutely investigated, and those only have been relieved which could bear this minute investigation, and could be proof against this searching ordeal.

But your Committee acknowledge that their relief has been inadequate; they have been obliged to vote £5 or £10, where their judgment and conscience have told them, a much larger sum was required; and they have done violence to their own feelings, because they had no more in their power; and this brings them to the humiliating acknowledgment, that your fund has not been supported by the profession according to its merits. Those who are above the risk of needing benevolent aid have probably thought that others were like themselves, or have been contented with *private charity*, forgetting that a Society like yours, was the very one to *investigate* cases, and to prevent that imposition to which each one in his private capacity must be subjected. While the coldness of the prosperous is probably thus to be accounted for, the apathy of the great mass of the profession is only to be explained on the plea of wilful self-deception, believing that misery does not exist, because they do not see it.

Your Committee therefore intreat all to look to the list of cases relieved; and they appeal to you in favour of the Benevolent Fund by the simplicity of its object, by the efficiency and discrimination of its working, and by its high principles and motives, and claims to universal support. They earnestly entreat each one of their subscribers to obtain *several other contributors* from the immediate circle of their personal friends, and so to present a phalanx of adherents, which shall prove itself invincible in action, as well as unequalled in value.

During the past year, a benevolent lady has had your report reprinted at her own cost, for distribution among her friends. This example of generous devotion to your cause is deserving of imitation, and is only equalled by that undying attachment to your fund, which has also been evinced by others of your kind lady friends: to them individually, and to all others similarly

engaged, your Committee beg to offer their especial thanks.

Your Committee have to regret that the working of your Society has been rendered difficult, *by the want of early payment of subscriptions*, and must have been several times suspended, but for the goodhumoured advances of their Treasurer; they therefore intreat attention to this want — “*qui cito dat, bis dat.*”

Your Committee beg to express their sympathy to their President, Dr. Baron, whose continued ill health has prevented his presiding at their meetings, and while they have had repeated testimonies of his care for your Society, they request his constant remembrance, and beg to offer their best wishes for his restoration.

To the non-professional donors and subscribers, and particularly to their valued friend and banker, Sir Walter Farquhar, Bart., they beg to tender their best thanks.

To the Medical Press generally, the Committee offer their acknowledgments, and especially to the MEDICAL GAZETTE, for whose *amende honorable*, and ample notice of their proceedings they are especially obliged.

Your Committee having arrived at the conviction that they required some other means of making their proceedings more widely known, and of exciting a greater interest in their behalf, after much deliberation, have resolved in holding a public dinner on your behalf, during the next spring; and they beg the kind consideration of their friends to this notice.

In conclusion, your Committee would review the history of the past, and their present position; and to each one of their subscribers, as well as to each member of the profession, they would say be just to thyself, and insure against all the emergencies of life; but be charitable to thy brother — “be merciful after thy power,” and contribute through the *one only channel* of pure charity—the Benevolent Fund, to the relief of distress, which they pray God, *you* may never feel;—but should such be your lot in this day of trial, and in this changing world, they equally pray God, you may never want the aid of the Benevolent Fund, without obtaining it,—a result which can only be insured by its being adequately supported.

Signed on behalf of the Committee,

WILLIAM NEWNHAM, *Chairman.*

London, July 8th, 1851.

ST. MARK'S EYE HOSPITAL, DUBLIN.

FROM the Fifth Report of St. Mark's Ophthalmic Hospital and Dispensary for Diseases of the Eye and Ear, Dublin, we learn that that charitable institution has been placed on an enlarged basis, and its sphere

of usefulness greatly extended through the munificence of its surgeon, W. R. Wilde, Esq., who has, at his own expense, completed the purchase of buildings formerly known as the Park Street School of Medicine; and having remodelled them, and fitted them for all the purposes of a hospital, has placed the hospital, free of all rent, at the disposal of the Committee. This hospital is spoken of as an ornament to the city of Dublin; it is certainly an honour to Mr. Wilde. It is capable of accommodating twenty patients; it is provided with a handsome operating-theatre and lecture-room, apartments for the resident assistant, a surgery, a large dispensary, as well as kitchens, store-rooms, nurses' apartments, &c. &c.

In order to maintain so large and essentially important an institution in an efficient state, considerable funds will be required; and we trust that they will ever be forthcoming, that the benevolent intentions of its projectors may not be frustrated.

UNIVERSITY OF LONDON.

FIRST EXAMINATION FOR THE DEGREE OF BACHELOR OF MEDICINE.—1851.

First Division.

Briggs, Henry, University College.
Carpenter, Alfred, St. Thomas's Hospital.
Carter, H. Vandyke, St. George's Hospital.
Ekin, James, University College.
Evans, Evan, University College.
Flower, William Henry, University College.
Gould, John Henry, University College.
Hillier, Thomas, University College.
Money, Fred. John, St. Thomas's Hospital.
Mushet, Wm. Boyd, University College.
Playne, Alfred, King's College.
Ramskill, Josiah, Guy's Hospital.
Robbs, William Edward, King's College.
Roberts, William, University College.
Roche, James Martin, University College.
Tunzelmann, Julius Woldemar de, University College.
Winter, John Newnham, Guy's Hospital.

Second Division.

Barker, Walter Goodyer, London Hospital.
Clarke, Erlin, King's College.
Doubleday, James, Guy's Hospital.
Evans, C. Reeves, University College and Paris.
Franks, H. J., Queen's College, Birmingham.
Grandy, Robert, University College.
King, H. Stavelly Thaddeus, King's College.
Langford, William, King's College.
Roberts, Elias Jones, Richmond Hospital, Dublin.
Wilkinson, Richard, King's College.

THE LAW REGARDING THE ADMINISTRATION OF MEDICINES BY LICENSED AND UNLICENSED PRACTITIONERS.

At the sitting of the Central Criminal Court on the 18th inst., the Recorder made the following remarks regarding death caused by the improper administration of medicines.

The first case was a charge of manslaughter upon an inquisition by the coroner against a person named Stevens, and it was alleged that he had unlawfully caused the death of the party named in the inquisition by administering medicine improperly to him. It appeared that the accused person was not a regular medical practitioner; he was a *herbalist*, and that he had administered medicine to the deceased by the mouth and otherwise, which, in the result, occasioned his death. In this case three questions would arise. First, whether the medicine was, in point of fact, administered by the accused; secondly, whether, if so administered, it was the cause of, or accelerated the death of the deceased; and, thirdly, if the accused was proved to have administered such medicine, whether he did so under such circumstances as would render him amenable to the present charge. The subject had undergone considerable discussion at different times, but he believed that the law was now perfectly well settled upon this point, that *it made no difference at all* in the inquiry whether the party accused was a regular practitioner or not, and the charge, under such circumstances, might equally be made against a person who had received a regular medical education as well as one who had not. *Any person, in point of fact, might administer medicine*, but the law required that every person who did so, whether a regular practitioner or not, should bring to the subject a proper degree of skill and knowledge, and if he acted rashly or negligently, or administered improper and violent medicines, and so occasioned death, the party acting in such a manner would be liable to the charge of manslaughter. The learned Recorder called the attention of the grand jury to the ruling of Lord Lyndhurst in a case "*Rex v. Webb*," which, he said, was a charge of manslaughter by the administration of a large quantity of medicine known by the name of Morison's Pills, which was to the effect he had stated, and said that the question they would have to consider in the case was, whether the accused person was proved to have acted with gross negligence, rashness, or ignorance, and, if that was made out, it would then be their duty to return a true bill.

Lectures.

NOTES OF
CLINICAL LECTURES

(Delivered at Guy's Hospital).

BY JOHN HILTON ESQ. F.R.S.
Surgeon to the Hospital.

GENTLEMEN,—The case which I have before me, and to which I this morning purpose drawing your attention, is one of much interest and importance, and, I feel convinced, will thoroughly repay a careful and scrupulous investigation. It is one of those cases in which, from the unconscious state of the patient, information as to the precise nature and seat of the disease or accident can be arrived at solely by an attentive consideration of the physical conditions presented by the patient, and apparent to the senses on experimental observation: one of those cases in which the diagnosis and treatment have to be founded, not on what the patient feels and expresses, but on those external symptoms which the disease produces, and the right interpretation of which depends on inferences supplied by physiology and past experience. The course I shall pursue in the following lecture will be;—first, to read you the report of the case, making what comments I may deem necessary on the way; and afterwards to consider, and, as far as lies in my power, to give an exposition of the symptoms manifested by the patient, before reading the post-mortem appearances, in order to show what conclusions were arrived at on pathological principles, and to point out how far those conclusions tallied with actual observation on dissection.

Case of Fractured Cranium—Laceration of middle meningeal artery—Effusion of blood between the dura mater and bones; and laceration of brain, with escape of blood into the interior of the brain (apoplexy?).

Daniel Gun, æt. 40, received into Cornelius Ward, Dec. 21st, 1850, under the care of Mr. Hilton,—a strong, stout, and muscular-built man, occupied as a bricklayer's labourer. A short time previous to his admission, whilst working at the London Bridge railway terminus, fell, *without obvious cause*, on his head from off a scaffolding thirty-five feet high, and sustained an injury which produced an immediate state of

partial insensibility, in which condition he was brought to the hospital about noon; presenting the following appearances:—On the right side of the head, above the ear, a lacerated scalp-wound, semi-circular in form, and about four or five inches in length, from which, it was stated, he had sustained considerable hæmorrhage; the right hand and foot much bruised; no fracture or depression of bone discoverable by a tactile examination of the cranium; but, from the bleeding which occurred from the nose, there being no evidence of external injury to this organ to account for such a symptom, Mr. Hilton suspected fracture of the base of the skull across the ethmoid bone. No hæmorrhage from either ear; breathing quick and laborious; pulse rapid and labouring; pupils contracted; and, although in a state of insensibility, yet, for a short time after his admission, he evinced occasional signs of consciousness if loudly spoken to. The hair being removed from the right side of the head, a ligature was placed on one small bleeding vessel in the wound, and grs. iv. of Calomel being put on his tongue were washed down with water.

2 P.M.—Insensibility complete. Pupils neither contracted nor dilated; the left iris obedient to the stimulus of light; but the right one, from having received a previous injury, does not respond. The mouth drawn to the right side, from palsy of the left side of the face, and the whole left side of the body partially paralysed, but the right side not at all so; pulse 140; respiration quick, irregular, and laborious.—Ordered Hydr. Chlor. gr. vj. et Olei Ricini, ʒj. statim sum.

8 P.M.—Pulse 142, small, but strong; breathing more heavy. Frequently moves the right upper and lower extremities, but not the left; yet the arm possesses some amount of rigidity, and does not fall like a completely paralysed limb. On tickling the sole of the foot of the left or paralysed side, the leg slightly jumped; but, on pinching instead of tickling, it remained motionless.

11 P.M.—Respiration more rapid, and attended with stertor. Pupils quite insensible to light. His symptoms, in fact, have been progressively increasing in severity since his admission.

Dec. 22d, 11 A.M.—Pulse 160, much smaller, and more feeble. Respiration 58, heavy, but not stertorous. Pupils insensible. Palsy of the left side of the face very complete; and on that side each expiration is attended with a blowing or puffing out of the lips, which is not the case on the right side. The right arm and leg remain under his control as hitherto; and although he does not voluntarily move

the left arm or leg, yet, in the case of the arm, he offers a slight resistance to its being disturbed. Passes urine and faeces freely beneath him. Mr. Hilton, having determined to trephine, made a vertical incision above the ear, at right angles to the lacerated wound. A large quantity of coagulated blood was observed effused into the temporal muscle; and on arriving at the bone, a fracture without depression was discernible, extending in a direction downwards and forwards, obliquely across the course of the distribution of the middle meningeal artery. The trephine being employed over the fracture and behind the position of the anterior branch of the artery, on elevating the piece of bone a large quantity of clotted blood was discovered, situated between the bone and dura mater. As much of it as could be easily reached was scooped out with the end of a spoon, and the edges of the divided scalp were afterwards brought in partial apposition, and fixed by means of sutures; allowing room for the free escape of blood, which continued to ooze out a little from within the cranium. The patient, in whom the operation had produced no important change, was placed quietly in bed, and instructions were given that wine should be administered to him, sufficient to stimulate his system to reaction, as he had become somewhat collapsed from the operation.

1 P.M.—In the same condition as before the operation, which has, as yet, produced no apparent effect on him, either beneficial or otherwise.

5 P.M.—Pulse 148, stronger; respiration 58, in character about the same as before; swallows his wine and nourishment better than before the operation; bowels relieved beneath him. Condition of his face unaltered, but can move the left arm and leg; the leg he moves of his own accord, raising it in bed; but the arm he only moves when it is pinched, and then in a much less degree than the leg.

Let us for a moment pause, Gentlemen, and consider the relation between the respiration and pulse observed at 5 P.M. When these two processes—the respiration and circulation—are observed in a healthy individual, they will be found to bear a relative proportion to each other of 1 to 4; that is, four pulsations of the heart during the combined acts of inspiration and expiration. If, then, observation and experience have proved this to be the usual proportion in health, any considerable deviation from it indicates not only disease of either the one or the other; but that which is most in excess or deficiency, or the farthest removed from the normal standard, may be inferred to have its function the most disturbed: and hence, in the instance before

us, we arrive at the conclusion that the morbid condition existing is of such a nature as to interfere much more with the function of respiration than of circulation. For, if the action of the heart were in due proportion with the respiratory process, we should have found the pulse about $58 \times 4 = 232$, instead of 148. To return to the report again: we find,

At 10 P.M. his pulse was 142, more full and strong; respiration 54, very heavy and laborious, but not stertorous; left extremities much warmer than the right, although both were situated under similar circumstances as regards external influences. Reaction being thoroughly established, the quantity of wine was diminished, so as not to cause over-excitement, and he was ordered—*R. Hydr. e. Creta; Pulv. Ipecac. Co. aa. gr. v.; ex. Mistura Mucilaginosae, 3j. 4tis horis.*

23d, 10 A.M.—Pulse 165, small and feeble; respiration 52. Appears much worse than last night; has again lost all power over his upper and lower extremities on the left side, and those on the right he has but little influence over. Still continues to swallow his wine and nourishment pretty freely.

2 P.M.—About the same. There is now no appreciable difference between the temperature of one side and that of the other.

6½ P.M.—Expired.

Now that I have placed before you the report of the case, let us again return to the bed-side of our patient before describing the post-mortem appearances; and analyse the symptoms he presented,—the true object and intention, I consider, of lectures such as these. The nature of the case, too, renders this course the more advisable, as it was those symptoms, and those symptoms alone, which we could ourselves observe, that we had to guide us in arriving at any definite conclusions as to the nature and extent of lesion, or the precise pathological condition of the injured parts,—a condition on which our treatment must necessarily be founded.

Certain facts have been clearly ascertained as regards the function of different parts of the brain. As they may, therefore, be regarded as established truths, and as they are immediately connected with the subject before me, it will be necessary to refer to them; but, in doing so, it will suffice simply to state the facts, without entering into details. Thus, it is satisfactorily made out, that the convolutions of the exterior of the brain are associated with the mental faculties or endowments: the corpus striatum, the thalamus nervi optici, and the parts in the adjacent neighbour-

hood, including the island of Reil, with the powers of voluntary motion and sensation of the extremities on the opposite side of the body, and the medulla oblongata, with the functions of deglutition and respiration. Reasoning on these premises, I think we may fairly infer, that the insensibility or loss of consciousness, — which was a prominent symptom in the case we are investigating, — resulted from some injury, laceration or otherwise, of the convolutions of the brain. In concussion, unaccompanied with laceration of the brain fibres, the patient does not become entirely insensible, for, if loudly addressed in his own name, he will give a reply, or show some signs of consciousness. Instances sometimes occur where the symptoms of concussion continue for a lengthened period; — and here, I think, will always be found some slight laceration of the cerebral substance.

The respiration, as I have previously observed, was unnatural, and numerically out of all due proportion to the circulation. The process of deglutition, also, was much interfered with, which would lead us to apprehend some implication of the medulla oblongata.

The right iris had sustained a previous injury, which rendered it incapable of conveying that information which it otherwise would have done; but the opposite pupil being contracted, denoted some irritation in the course of the third nerve on that side. In compression of either the third or optic nerve, the pupil is dilated. The left pupil, again, was at first sensitive, or obedient to the influence of light, thus proving that the function of the second nerve remained uninterrupted; for the second nerve it is which is the incident or excitor nerve to the movements of the iris.

His mouth being drawn to the right side, and the other symptoms referred to in the report as indicating palsy of the muscles on the left side of the face, denoted some compression or lesion of the facial nerve of the left side.

His left upper and lower extremities, we have seen, were almost completely paralysed; but his right side not at all so. Neither had he, as far as could be learned from pinching him, &c. any loss of sensibility on the right; whilst on the left side such treatment gave unmistakeable evidence of almost complete loss of sensation. From these considerations, we may conclude that the cause producing the symptoms was not central, but one-sided; and, according to the established laws of decussation, it must have existed and have acted on the right side of the cerebral mass. Had it been central, it must have produced palsy on both sides alike. You will remember it

was stated in the report, that the left leg, although paralysed, slightly jumped when the sole of the foot was tickled, yet when pinched, or more roughly treated, remained motionless. This jumping, however, Gentlemen, was not a voluntary act; neither had it any thing whatever to do with the will, but was simply an excito-motory action dependent on the spinal cord, and induced by the impression made on the sentient extremities of the nerves of the sole of the foot. The reason pinching did not produce a similar effect is obvious and explicable, for observation has proved that gentle impressions are infinitely more powerful in exciting the excito-motory or reflex-spinal system than more harsh and rough usage.

Having thus arrived at, and defined the probable seat of lesion, the question next arises, What is the nature of this lesion? What is the cause producing the symptoms under which the patient labours? We know the parts of the brain whose functions are interfered with. But does this interference depend on pressure on the exterior of the brain, or does it result from actual lesion of the cerebral substance itself? It is here, Gentlemen, we meet with a serious and overwhelming difficulty; a difficulty, from which observation, even the most attentive observation, will not enable us to extricate ourselves with certainty. Both or either of the conditions mentioned, might have produced the symptoms described. They might have resulted from the pressure of a clot of blood between the skull and dura mater, or they might have arisen from lesion of the interior of the brain; for instance, of the right hemisphere, the corpus striatum and optic thalamus, or of the pons varolii. Having this difficulty and uncertainty before us, how are we to approach the case as regards treatment; the right application of which will materially depend on our impression of the true nature of the existing lesion? We shall derive some assistance and explanation, if, instead of confining ourselves to the symptoms alone, we place in the scale of evidence the previous history of the patient. We find here, that his symptoms occurred suddenly, and that they resulted from a severe blow received on the head, from falling off a scaffold, at a height of thirty-five feet. Taking into consideration this circumstance, the most plausible inference is, rupture of one or more of the vessels of the meninges of the brain, from the concussion of the fall, leading to the effusion of blood, which pressing on the exterior of the brain would be quite sufficient to account for most of the symptoms which the patient manifested.

I have stated to you in the report, that

on his admission blood was observed to be flowing from the nose, and yet it did not appear that this organ had received any direct external violence or injury to account for it. It was principally from these facts, combined with his having received a diffused blow on the head, that I stated my opinion, which you have already heard, that there was a fracture of the base of the skull, which fracture traversed the cribriform plate of the ethmoid bone. The post-mortem appearances will afterwards prove to you how far I was justified in making this observation, and how far my diagnosis was correct. When you find a patient, after having received a diffused blow upon the head, presenting symptoms of hæmorrhage from the nose or ear, or when you observe blood trickling down the pharynx, no direct injury having been inflicted to account for these phenomena, you may almost positively assert that fracture of the base exists. I am fully aware that in these remarks I am opposed to many; but, Gentlemen, I give them to you with confidence, and with assurance that you may rely on them, not as doubtful, but as almost certain diagnostic indications.

Let us now occupy a short time in enquiring what indications the case affords us, in directing us to a determinate plan of treatment. To have bled him would have been improper and injudicious; for the character of his pulse contra-indicated his ability to bear the loss of a large quantity of blood, and a small quantity would have been of no use in such an instance. Warmth, stimulants, and a free evacuation of the bowels, were undoubtedly indicated. I may here remind you, that, in administering calomel, as was done in this case, or, indeed, any other medicine or food intended to be conveyed to the stomach of a patient in the condition of the one before us—that is, in a state of insensibility or unconsciousness, the substance to be swallowed should be placed on the posterior part of the tongue; in which situation it will excite the sentient extremities of the glosso-pharyngeal nerve—the incident nerve to the process of deglutition; and thus, independently of the will of the patient, produce such a series of muscular movements as to force the morsel to be swallowed onwards into the œsophagus and stomach. If, on the contrary, anything intended to be swallowed be placed on the anterior part of the tongue, which is supplied by nerves in association with the process of mastication, there it will remain, and will not, as in the former instance, induce the process of deglutition; but, once placed within the range of the glosso-pharyngeal nerve, in all cases, whether the will con-

sent or not, provided sufficient vitality remains, it produces that action and those series of movements which accomplish the object desired—viz., deglutition. See, then, Gentlemen, how important it is to bear this fact—derived from a knowledge of the function and anatomical distribution of nerves—in mind; not only for the purpose of introducing medicine and food into the stomach of those who lie in a state of unconsciousness, but, also, in those who having the power of thought, yet from some cause or other obstinately refuse to swallow what may be deemed essential and requisite.

Twenty-four hours after the accident, it is seen, there was no improvement of his condition. On the contrary, an increased severity of his symptoms. The paralysis of his face and of the extremities of his left side was now almost complete, and much more than on his admission. It is quite evident, therefore, that as these symptoms were progressive, the cause must have been progressive also. The diagnosis most consistent with this circumstance, under the conditions of the case, was rupture or laceration of a vessel from the violence of the fall, leading to a progressive effusion of blood between the skull and dura mater. Again, the external scalp wound was of an extensive nature, and situated over the position of the distribution of the middle meningeal artery. From this fact, and from having already rendered the existence of one fracture, namely, across the ethmoid bone, more than probable, we were led to infer or suspect the existence of another fracture, which would account for the presumed laceration of a branch of the middle meningeal artery, and the consequent effusion of blood. It was from reasoning on these premises and suppositions that I determined on the operation of trephining, which you saw me perform.

Having completed the preliminary stages of the operation, and denuded the bone, there appeared a fissure running in a direction pointed out to you in the report: namely, downwards and forwards. A question might now arise; was this a fissure in the bone, or was it a natural suture? In the first place, it had not the exact position and situation of a natural suture; neither had it the dentate appearance of a suture; and, again, on more minutely inspecting it, it appeared as a dark line, arising from a fine layer of blood interposed between the edges of the bone. The consideration of these circumstances could not now leave any doubt of its being a fracture.

I used the largest sized trephine, and applied it just behind the situation of the anterior branch of the middle meningeal artery, which, in the adult, is to be found about an inch and a half behind, and a

little above the level of the external angular process of the os frontis. On elevating the piece of bone, a clot of blood was seen situated immediately beneath it, and between it and the dura mater. So far, then, our interpretation of the symptoms was completely verified; and we see that these cases, although at first apparently involved in much obscurity, yet, if thoroughly investigated, afford reasonable expectations of their diagnosis being determined with accuracy and precision. Time will not allow me to proceed farther to-day: I shall therefore complete the examination of the case at our next meeting.

Original Communications.

CASE OF

INTERNAL STRANGULATION OF THE INTESTINES:

WITH REMARKS.

BY GEORGE F. LANE, M.R.C.S.

Resident Surgeon at the Royal Free Hospital.

(Read before the Abernethian Society,
Jan. 9th, 1851.)

MANY cases of disease are brought before the attention of every surgeon who has an extensive field for observation, in the treatment of which, the resources of medicine and surgery are almost entirely unavailing, and of these, none are more painful to witness, or to treat, than those which result from invincible obstruction of the intestinal tube; the unsuccessful treatment of such cases depending upon our ignorance of the nature of the malady itself, which necessitates the administration of a mere routine of remedies, without our being able to arrive at more than a surmise as to the position and kind of obstruction.

In some instances moreover, as in the one before us, certain symptoms exist, calculated to mislead and considerably augment the usual difficulty in making a correct diagnosis. Nevertheless, there are certain facts to be elicited from the history of these cases and the sensations of the patient, which, when carefully studied, may lead us to correct conclusions as to the seat and nature of the obstruction: and the importance of having a series of these cases upon record,

will, I presume, justify my bringing forward the following one, which, though isolated, is one of a class in which no other measures than those of a mechanical nature can be supposed to have any chance of success; and hence it becomes important that we should study those symptoms, which lead to a correct diagnosis at an early period, when the more advantageous circumstances of the case are most likely to conduct an operation to a successful issue.

On Thursday, the 26th of December last, Mr. Gay was requested, in consultation with Mr. Burchell of Shoreditch, to see Thomas Wallis, a small but well-proportioned man, aged 42, under the following circumstances:—

About four years previously, and soon after lifting a heavy weight, he was suddenly seized with severe pain, referred to the left iliac region, which immediately afterwards extended itself across the abdomen to the right side; the pain, which was of a “pinching” character, occurred in paroxysms, with intervals of perfect repose, and was accompanied with constipation, sickness, profuse perspiration, and, in his own words, “great helplessness.”

These symptoms increased in severity, the pain being at times agonising, and it was not until after four days, when copious action of the bowels ensued, that they subsided as rapidly as they had set in. From that time up to the period of which I am about to speak more particularly, he had, according to his own account, at least thirty attacks of a similar character, lasting from one to four days, always commencing in the left side, and marked by severe pain, constipation, and extreme debility; and occasionally with the superaddition of vomiting and profuse perspiration. During the attacks, hot bran poultices and fomentations gave most relief, and his recovery on each occasion had been coincident with free action of the bowels.

On Saturday, the 21st, after eating his dinner, he complained of a return of the pain, and as his ordinary aperient dose did not take effect, Mr. Burchell was sent for, and further aperient remedies were exhibited. On the following day (Sunday), vomiting supervened, and he complained that the pain had extended itself across the abdomen to the right side, but was not much increased by pressure; the pulse was 100, slightly

jerkings, and the tongue furred. Aperient medicines were again administered, but without effect.

On the 23rd, the sickness was more constant, and everything taken into the stomach was almost immediately rejected. In the course of the day the pain in the *left iliac region* became very severe, occurring in paroxysms at short intervals, and considerably aggravated by each act of vomiting; the pulse remaining nearly the same. A blister was applied over the seat of pain, calomel and opium given every four hours, and enemata of castor oil administered.

24th. One enema brought away a small quantity of fecal matter: the others returned as injected immediately after they were administered: the pain in the left side still formed a prominent subject of complaint, and it was only when pressed that the other parts of the abdomen gave evidence of tenderness. There was no heat of skin or other symptom of pyrexia. The calomel and opium were continued, together with hot fomentations to the abdomen, and croton oil was afterwards administered in minim doses every four hours.

On the 26th, the whole of the symptoms were decidedly worse, and the vomited matters yielded an undoubted fecal odour; hiccup now ensued, together with rigidity of the muscles of the lower jaw and of each hand. Mr. Gay saw him at 5 o'clock, P.M., when his condition was as follows:—He was lying on his back, his face deathly pale, with a countenance expressive of extreme anxiety, and bedewed with perspiration. The breathing and heart's action were regular and tranquil. On directing attention to the abdomen, it was found somewhat tumid, hard to the touch, but presenting no marked irregularity of surface or enlargement; pressure over the left iliac fossa occasioned intense pain, but over other parts of the abdomen there appeared little more than slight tenderness. There was dulness on percussion around the umbilicus and over the cæcum, but resonance along the course of the colon; no enlarged convolutions of intestines could be detected.

Fæcal vomiting was frequent, the tongue dryish, and coated with a thick fur, the pulse feeble and thready, but regular: attempts were made to pass O'Beirne's tube, and an œsophageal bougie, but these could not be intro-

duced further than 6 or 7 inches, and fluids injected by this means returned almost instantly by the side of the tube, nor could the latter be passed further by taking advantage of the moment of injection for pushing it onward; and when it seemed to have overcome the obstruction, the tube was found to have bent, and its extremity protruded externally.

Throughout this attack, the urine had not materially lessened in quantity. There could be no doubt that intestinal obstruction of a very unyielding nature existed here, and that in the adoption of measures to overcome it, if any presented themselves after due consideration, the only chance lay in promptitude. Five days had now elapsed since the setting in of the symptoms, and no relief whatever had been afforded the patient by the ordinary measures employed.

The preceding twenty-four hours had witnessed so rapid an increase in the severity of the symptoms, that all were of opinion, that the sufferer would speedily fall a victim to his malady, unless some relief was speedily obtained.

Crude mercury was not given, since, from the evidence afforded of its effects in similar cases, it was not thought likely to be of service.*

It was desirable to make out as clearly as the preceding symptoms would admit, the exact nature and seat of the obstruction. The pain referred it to the left iliac region, and the previous history of the patient led to the inference that chronic disease of some kind existed in a portion of the intestinal tube or in parts contiguous. Mr. Gay surmised that the omentum had become adherent to the abdominal parietes, and that a knuckle of intestine had (as he had before seen), forced its way through a rent in its tissue and become strangulated.

The evidence gained from percussion appeared rather to involve the question in difficulties, than to throw any light upon it. The dulness on the right side was referred to a distended cæcum, and this, with resonance along the colon, seemed to imply that the obstruction was situated in the ascending colon. But this view again was irreconcilable with the fact of the chief seat of pain being

* See Med. Chir. Trans., vol. xxxi., p. 62.

on the opposite side, and the early setting in of vomiting.

The difficulties in determining the seat of obstruction appeared to increase as the investigation was pursued, and we could only fall back upon the fact that such obstruction existed; which, from the early occurrence of vomiting, was supposed to be high up in the bowel.

It was reasonable to suppose, that the temporary attacks of constipation from which the patient had suffered for the four years preceding this illness were due to the same cause as at present acting with mitigated severity, and it was concluded that this cause must be of a fixed and permanent nature; that in short there was constriction occasioned either by an abnormal band or bands of cellular tissue or the edge of an aperture in the mesentery or omentum, beneath or through which a coil of intestine had passed.

In this state of affairs it became a matter of consideration if any, or how far, surgical interference was called for. The patient had become anxious that something further might be tried in order to relieve him, and expressed himself willing to submit to anything. After due consultation, in which the further exhibition of remedies without resorting to operation, and the probable failure of an operation if put in practice, were duly considered, the conclusion was arrived at that, as all attempts by ordinary measures had failed to procure any relief, the only chance for the patient, however small that might be, was in seeking for and relieving the intestine: accordingly, the room being raised in temperature, the bladder was emptied, and the patient narcotised by chloroform. Mr. Gay proceeded to operate in the presence of Messrs. Coulson, Childs, Burchell, and myself.

The abdominal cavity was opened by an incision in the linea alba about four inches in length, between the umbilicus and pubes; this situation being chosen as the safer one, since from it all parts of the abdominal cavity were within reach. A portion of distended and deeply congested ileum at once protruded through the wound, which it became necessary to enlarge two inches upwards, avoiding the umbilicus. Attention was first directed to the seat of pain, but no incarceration being found,

the ileum was traced to the right side, where several coils of contracted intestine were discovered, constricted by what appeared to be a portion of stretched bowel. On closer examination this was found to be the vermiform process of the cæcum encircling the bowel, and producing a tight constriction. Some adhesions were broken down so as to admit of the release of that portion of intestine which had passed through this loop of the appendix, after which the fluid contents of the bowel passed through the part of the canal which had been constricted, affording evidence of its freedom. During the manipulations, care was taken to keep up the temperature of the protruded viscera, and these having been gradually returned as the wound was closed by suture, the parts were maintained in position by strapping, pads of lint, and circular rollers.

The operation lasted a little more than half an hour, a considerable part of which time was occupied in searching for the strangulation, the situation of the pain and tenderness having misguided as to the seat of obstruction.

The effect of the chloroform soon passed off, and some wine was administered: the patient's pulse, which had been very low during the operation, increased in power, and he described himself as relieved, but no action of the bowels ensued, and, within half an hour after the operation, vomiting returned, attended with eructations of fœtid gas.

During the night ammonia was administered every four hours, and brandy and water at intervals. The vomiting and constipation, however, continued; and he gradually sank, and died twenty-two hours after the operation.

For the following details of the autopsy I am indebted to Dr. Peacock's notes.

Post-mortem twenty-four hours after death.—On laying open the cavity of the abdomen, the small intestines were found greatly congested, distended, and agglutinated together by soft and recently exuded lymph. The seat of the obstruction was very readily detected in the right iliac region, and the strangulation proved to have been formed by a protrusion of a portion of the small intestine through a ring formed by the appendix vermiformis cæci, the ileum, and the cæcum.

The annexed drawings, which I made from the parts in their recent condition, exhibit the mode of strangulation.

FIG. 1.

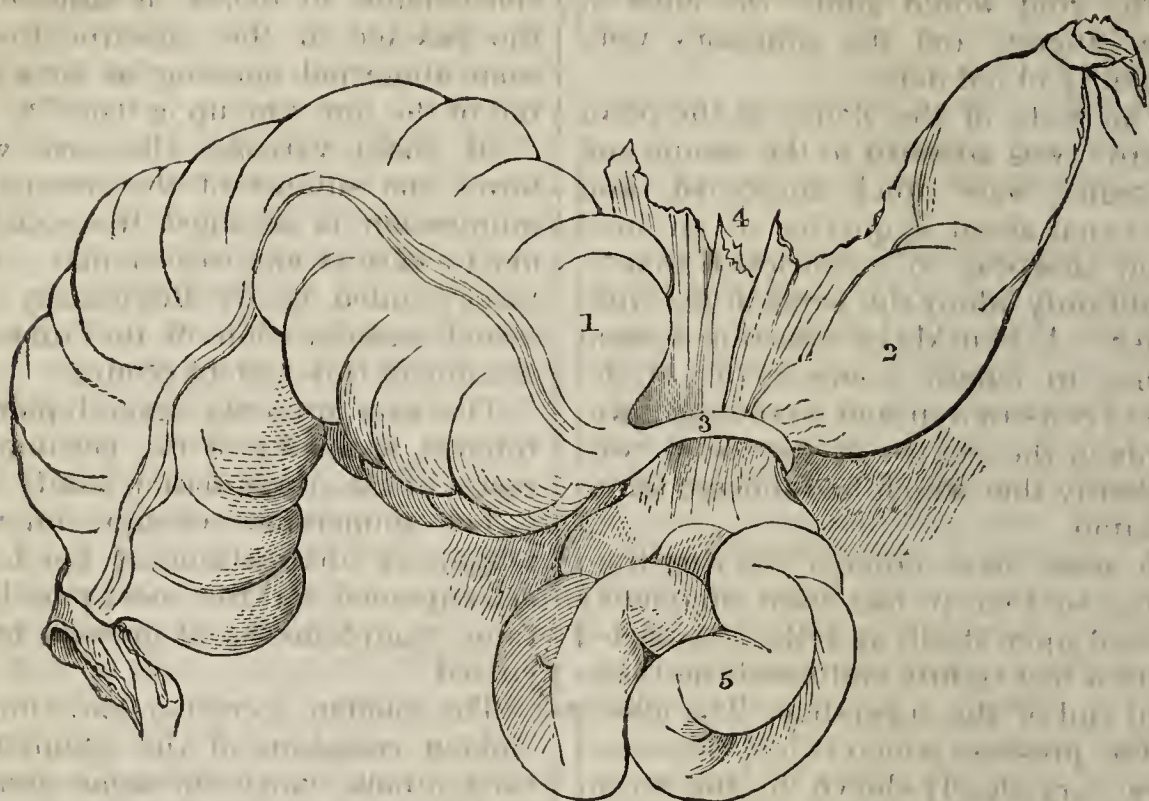


FIG. 2.

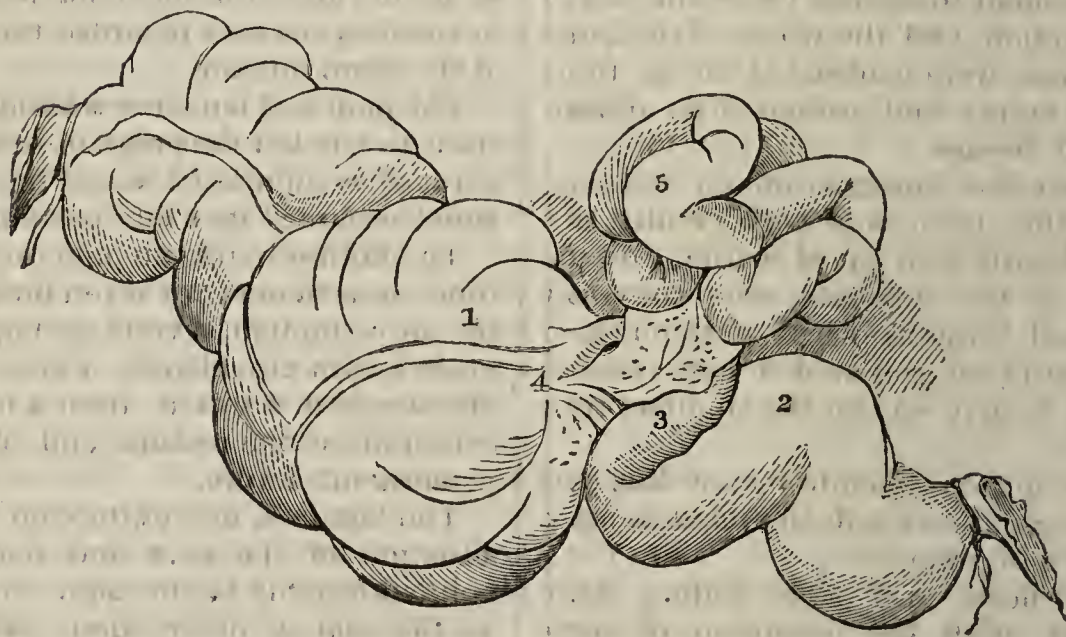


Fig. 1. Represents the intestines removed and slightly inflated, exhibiting the appendix encircling a portion of ileum, the parts being placed as they were before operation.

1. Cæcum.
2. Ileum above the strictured portion.
3. Appendix vermiformis cæci.
4. Cut edge of the mesentery.
5. Strangulated intestine.

Fig. 2. Represents the same parts with the strangulated portion raised, so as to exhibit the head of the appendix, together with the band of false membrane.

1. Cæcum.
2. Ileum.
3. Enlarged extremity of the appendix.
4. Abnormal band connecting the ileum and cæcum.
5. Strangulated intestine.

The appendix was much thickened, and its extremity adherent to the ileum at a point about twenty-five inches above the cæcum, the same portion of

the intestines being also attached to the cæcum by a short adhesion: a complete ring was thus formed by the cæcum, on the right side, the appendix in front,

the ileum on the left side, and the adhesion between the cæcum and ileum behind.

The ring would admit the ends of three fingers, and the adhesions were evidently of old date.

The coats of the ileum, at the point where it was attached to the cæcum and appendix, were much thickened, and the canal about a quarter of an inch below this was so constricted that it would only admit the point of the little finger. A knuckle of intestine several inches in length, commencing at the seat of constriction, and extending downwards in the course of the canal, was evidently that which had suffered strangulation.

It must have entered the ring from above, so that it had been completely twisted upon itself, and the constricted portion had tightly embraced the thickened end of the appendix. The effects of the pressure which it had sustained were very clearly shown by the recent false membranes which covered its surface, and the congestion of its vessels.

The small intestines below the seat of constriction, and the whole of the large intestines, were contracted, so as to be nearly empty, and presented no appearance of disease.

Above the constriction, on the contrary, the ileum was very greatly distended with thin faecal matter, and the coats of the intestine were intensely inflamed, being in places quite black, or displaying ash-coloured sloughs, and so soft as to give way on the slightest traction.

The mucous membrane of this part of the canal was inflamed, and in some places gangrenous.

The heart and right kidney were healthy, with the exception of some congestion of the latter: the other organs were not examined.

Among cases of intestinal obstruction strangulation of a portion of bowel within the abdomen is not of rare occurrence, and may take place in several ways, the most common of which are where it is occasioned by circular or fissured spaces, formed by bands of false membrane running from one organ to another, by adhesion of two convolutions at a small point, or by perforation of the mesentery or omentum: but there is a greater variety in these cases than in those of hernia, scarcely two cases being found alike.

Of 169 cases of obstruction collected by Mr. Phillips, 133 were fatal, and more than one-third were "caused by constriction by bands, by adhesion, by the passage of the intestine through some abnormal opening, or by a twisting of the intestine upon itself."*

Of these varieties the case which forms the subject of the present communication is amongst the rarest, nor am I aware of any case similar. Of 15 cases related by Dr. Rokitsky of internal strangulation of the intestines, not one of this variety occurs.

The case presents several points of interest, exclusive of the peculiar character of the strangulation itself; viz.,

The numerous occasions on which temporary obstructions of the bowels, accompanied for the most part by the same symptoms as at present, had occurred.

The sudden accession, and almost as sudden cessation, of the symptoms on each attack, which on some occasions lasted as much as four days; facts pointing to a persistent cause of obstruction, and forming valuable features in the diagnosis, as regarded the nature of the strangulation.

The pain and tenderness being so constant in the left iliac region, though the point of strangulation was at the cæcum, which occupied its usual position.

The failure in introducing the flexible tube more than six or seven inches from the anus, though several attempts were made by practised hands, arose, as was afterwards discovered, from a collapsed condition of the rectum, and of a very prominent sacrum.

The last fact, in conjunction with the situation of the pain and tenderness, pointed forcibly to the sigmoid flexure as the seat of obstruction, and might have justified the performance of Amussat's operation.

When obstruction of the bowels, and symptoms of strangulation, exist in conjunction with the occurrence of an enlargement in any of the usual seats of hernia, the treatment is regulated by thoroughly established rules, and unless there has been much delay, these are attended with a good prospect of a successful issue; but on the contrary, when the same symptoms exist, without any such external swelling, and continue persistent notwithstanding the employ-

* Med.-Chir. Trans., vol. xxxi. page 4.

ment of ordinary measures for their alleviation, it becomes a question of much importance: whether operative surgery furnishes any prospect of relief, or whether the patient so suffering must be left to perish without such chance being afforded him.

Cases occur from time to time, in which there is obstinate and fatal constipation, and a post-mortem investigation discloses that the nature of the obstruction was such, that had Amussat's operation been practised, very favourable results might have been anticipated.* So also, in post-mortem examinations of cases of internal strangulation, instances every now and then are met with, in which the bowels have been confined by a thread, as it were, of false membrane, the result of some previous inflammatory attack, so situated, as to have been susceptible of easy release had an opening been made in its neighbourhood: several of such cases have come under my observation, two of which arose from adhesion between the bowel and the walls of the abdomen, in the neighbourhood of the femoral opening and internal ring, allowing a portion of the intestine to become strangulated beneath.

Thus it appears cases exist in which the strangulation might be relieved if we possessed the means of ascertaining its situation, yet surgeons differ in their opinions with regard to the performance of gastrotomy in such cases: the opinion of Mr. Lawrence is given in his work as follows:—"Thus the danger of the proposed operation is certain, and so great that it cannot be overrated; the existence of internal strangulation is quite uncertain, and the power of removing the obstruction even if it were discovered, somewhat doubtful; again, in some cases apparently desperate, spontaneous recovery takes place when our treatment has been unavailing."

I think that a consideration of the circumstances of the foregoing case, together with those of others on record, would lead to the conclusion that in some cases of intestinal obstruction the evidence of the character of the obstruction is sufficiently good to justify and require the attempted relief by operation, and that in the course of time, when we have more facts to bear upon the question, the diagnosis may

be much facilitated; still, under the present difficult state of diagnosis, great caution is required in selecting cases, and we ought not to hazard this fearful operation, the success of which is presumed possible in certain cases only, when the indications of the nature and locality of the obstruction are not sufficiently positive to outweigh the prejudicial effect of the operation *per se*, and its chance of being inadequate to relieve the patient.

The general maxim, that it is better to try a doubtful remedy than to do nothing, requires a careful discrimination in these cases, since many are on record in which nature has brought about a favourable issue, though all other measures had failed.* The number of instances in which the operation of gastrotomy has been performed are so few, and those necessarily at so advanced a period of the malady, that it would appear irrational to be unfavourably biased against the operation by its as yet doubtful results.

If there be a chance of success in the operation, those symptoms which, being well understood, tend most to provide the means of diagnosing correctly the nature and seat of obstruction, are of the greatest importance, and it is principally to further investigations, with a view of determining these, that we must look in order that the operation may be placed in a more favourable position as regards its practicability in certain cases of internal strangulation. The cases of spontaneous recovery after all remedial measures have failed, alluded to by Mr. Lawrence, would appear to be such as the following detailed by M. Jobert, in which the man, *æt.* 28, was reduced to a condition which threatened fast approaching death: having refused the operation of gastrotomy he recovered under the use of leeches round the anus, warm baths, warm fomentations, and injections. But it should be observed, that enough evidence of the nature of the obstruction is not recorded to justify the conclusion that an operation, even at an early period, would have been attended with success; and in such cases the chances of the operation are reduced to a minimum.

Since this case was communicated to

* *Traité théorique et pratique des maladies chirurgicales du canal intestinal*, par M. Jobert.

* *Lancet*, Aug. 9th.

the Abernethian Society, an elaborate paper upon the subject, by Mr. Robinson, has appeared in the London Journal of Medicine for July, in which he draws the following conclusions:

1. Internal strangulation most frequently occurs in the ileum.
2. Membranous bands are the most frequent cause of internal strangulation.
3. Partial peritonitis is more likely to induce obstruction than general.
4. All the convolutions of the intestines may be matted together by adhesion without obstruction.
5. Mechanical are not the sole causes of obstruction, as there is reason to believe that the mechanical cause must have been in existence some time prior to the occurrence of the symptoms; other causes must arise to produce them, and the most frequent are sudden exercise, and errors of diet.
6. It is possible for spontaneous cure to take place by ulceration of an obstructing band.
7. The symptoms vary considerably in different cases.
8. The order in which the symptoms arise is important in diagnosis.
9. There are no symptoms by which one obstruction can be distinguished from another.
10. The strength of the patient must be maintained as part of the treatment.
11. Bleeding requires great caution.
12. The operation of gastrotomy is only justifiable as a forlorn hope.
13. Metallic mercury has proved useful, chiefly from obstruction from ligamentous bands."

Royal Free Hospital,

August 1851.

PATHOLOGICAL STUDIES ON THE BODIES OF THE DROWNED.

By FRANCIS OGSTON, M.D.

Aberdeen.

[Concluded from page 294.]

PART IV.—CONCLUSION.

THE three previous papers were devoted to a review of the leading phenomena presented by the bodies of the drowned at different periods after death, and this having been accomplished, our object in presenting them to the profession has been so far accomplished. Before

taking leave of the subject, however, it may not be altogether superfluous to direct attention to a few points which these researches may serve to illustrate.

It will have been seen, from the facts and circumstances adduced, that the inquiry into the cause of death, in cases of suspected drowning, on the part of the medical practitioner, may have to be undertaken by him at different periods after the fatal event, and that frequently in circumstances widely different from those which are encountered in the ordinary post-mortem examination of the body. When, for example, the person's death has been witnessed, though it could not have been averted, or where the locality has been a frequented one, or when the body has subsequently drifted into shallow water, the corpse may have been speedily recovered, and submitted to inspection while still fresh, and while the indications of death by submersion are most of them present and distinctly marked. It is from this class of cases chiefly that writers on this subject have drawn up their descriptions of the appearances on the bodies of the drowned; and had we in practice only to deal with instances of this sort, the determination of the cause of death would be in general satisfactorily accomplished. When, on the other hand, none of the preceding circumstances have attended or followed the death of the party submerged while alive, the examination of the body may have to be undertaken after decomposition has commenced, or even made some progress in it, and when the various indications of this particular mode of death have become more or less indistinct, or have altogether disappeared. Thus it is that, in this class of cases, in addition to the usual signs of death by submersion, the examiner is required to study and appreciate the series of changes originating in the prolongation of the stay of the body in water; those alike which are traceable to the influence of the medium in which it has lain, those which are dependent on its decomposition, and those which are due to the combination of both sources of alteration of its parts. This, while it renders the task of the examiner sometimes anything but a pleasant one, makes it at the same time equally unsatisfactory, from the degree of uncertainty which may necessarily be atten-

dant on the decision he is seeking to arrive at.

Of the first of these two classes of cases we have sufficiently detailed accounts, the phenomena to be encountered in them having been ably described by most of our writers on medical jurisprudence. It appears to us, however, that, both in this country and on the Continent, undue prominence has been sometimes given to certain of the trivial signs of death by drowning, while other signs of acknowledged worth have not been sufficiently guarded against all the chances of fallacy which attend on their practical application.

Amongst our German brethren, the presence of the *cutis anserina* is considered as a sign of some value; but, independently of the fact of its frequent absence in cases of drowning (vide Part II. § 12), we have found it well marked in instances of sudden death from other causes. A *half-open state of the eyelids* seems rather the exception than the rule after death by submersion (vide Part II. § 6). The *expanded pupil* is not a constant phenomenon in this mode of death; and, besides being common to most cases of death, both by asphyxia and coma, the dilatation of it to any extent does not long persist (vide Part II. § 6). The *position of the tongue* is subject to variety after death by drowning; and its tip, if we may judge from our own observations, is oftener to be found within than projected beyond the front teeth (vide Part II. § 8). An *injected state of the interior of the air-passages* was noticed by us to any marked extent in only 15 of our cases; and of these, 5 alone were recent bodies. We did not encounter *dirt or sand under the nails* at all (vide Part II. § 4). *Abrasions about the hands* seem less frequent than on other parts of the surface in the drowned (vide Part I. § 10). *Fluidity of the blood* is not a constant phenomenon in cases of death by drowning (vide Part III. § 14). *Elevation of the epiglottis* is natural to the dead body. The *depression of the diaphragm*, said to be characteristic of death by submersion, appears to us to be a circumstance of difficult verification, and, in any case, will be dependent on the expansion of the lungs. The *bladder* seems to be met with fully as often empty as *containing urine* (Part III. § 15). The indications of *asphyxia generally*, even in recent bodies,

deducible from the *congested state* of the scalp, encephalon, lungs, right heart, liver, kidneys, spleen, and intestinal tube, are subject to considerable modifications (vide Part III. §§ 1, 2, 3, 4, 8, 9, 10, 11, 12, 13). This circumstance cannot be too strongly urged on the notice of the practitioner, as, from the extent of the congestion of these parts, on the one hand, and its deficiency on the other, inferences have been sometimes drawn which a more extended view of the appearances in the drowned would not have authorised. Inferences equally unwarranted have also been derived from the relative extent of the congestion in the cranium, lungs, heart, and other parts of the system; and on such data authors of repute have even contended for diversified modes of death by submersion in different circumstances. We allude particularly to the fivefold division of the modes of death in drowning adopted by Devergie from the writings of earlier authors. The doctrine of *syncopal asphyxia* assumed by him to account for death in some cases of drowning is untenable on physiological grounds. The hypothesis of death by *syncope* is based upon appearances of a negative kind; such as the absence of froth in the air-passages, and of congestion of the surface and viscera, which are best explained by a reference to the state of the body, and the time at which the examination is instituted (vide Part III. § 16; Part II. §§ 9 and 13; and Part III. §§ 4, 8, 9, 10, 13). The hypothesis of death by *apoplexy* appears to have been adopted to explain the circumstances attending the death of persons of apoplectic habits, or who have fallen into the water while in a state of intoxication. It should be borne in mind, however, that the actions which prompt to the preservation of life in the circumstances we are considering are not the result of intelligence and calculation, but are of a purely instinctive kind. A person in such a state of insensibility, however caused, has been observed to struggle powerfully in the water, leaving on his body abundant indications of his having only gradually become asphyxiated. Of this we cannot select a better example than the following:—A shipmaster, who had had more than one previous attack of apoplexy, was observed to fall down insensible much in the same way as on former occasions. This happen-

ing while he was on the edge of a lighter. Before assistance could reach him, he slipped into the Aberdeen Harbour. Notwithstanding his state at the time, he was seen to maintain a vigorous struggle before he sunk and disappeared. Some hours elapsed ere the body was recovered, which, on inspection, showed all the signs of death by drowning unusually well developed. The head was in this instance very highly congested.*

Valuable as we consider the presence of *watery froth in the air-passages* of the recently drowned, as an indication of this mode of death, we have, on more than one occasion, met with instances of death by coma in which the froth found in the mouth and trachea resembled so closely the froth of the drowned, that we could not, had the circumstances attending the death of the parties been unknown, have undertaken to discriminate between them. Besides, on a previous occasion,† we had an opportunity of referring to a case of poisoning by laudanum in which a light watery froth, like that of the drowned, was encountered in the trachea. Lastly, with Orfila and others, we are disposed to ascribe considerable importance to the finding of *water in the air-cells of the lungs*, or even *in the trachea and bronchi*, as diagnostic of drowning in water of ordinary depth. Unfortunately, this sign is not always unequivocally witnessed, particularly in the former of these situations (vide Part III. § 17).

In the cases we have collected those belonging to the first class preponderate over those of the one to which we would now shortly advert. The drownings having happened in so many instances in a public tidal harbour, or in a frequented and shallow canal (vide Pt. I., § 6), explains this exceptional occurrence, the reverse of what may be usually expected in practice. Cases of accidental drowning oftenest take place during the night and in solitary places, while the object of the intending suicide is obviously best secured by his selection

of such a time or such a locality as one or both of these; and the murderer could only thus find the desired opportunity for the disposal of the body of his victim. After death by submersion the corpse speedily sinks and disappears, and, unless purposely sought for, will seldom be discovered till putrefaction has again rendered it buoyant, and the force of gravitation has attracted it to the land or some body emergent from the water. This may occur pretty early in summer; but at whatever season the occurrence is by this means brought to light, the consequences as respects the examination of the body of the drowned will be nearly the same. The signs of death by submersion disappear mostly in the order of their importance. First, we have the disappearance of the indications of this special form of asphyxia; then those of asphyxia in general; while the equivocal signs alone persist indefinitely, or rather become more distinct with the lapse of time.

The froth of the drowned was not witnessed in any of our observations later after death than $55\frac{1}{2}$ hours in summer, and the 4th day in winter (Pt. III. § 16). Thus we can seldom have this sign to rely upon in this class of cases.

Water in the air-cells of the lungs was present in 22 instances, and in the trachea in 25 (Pt. III. § 17). In 16 of the former only was its amount considerable; while in 2 it had made its escape into the cavity of the chest so early as 12 and 17 hours after death, leaving it merely to be presumed whence the water had come. The average duration of the persistence of the water in the air-cells of the lungs was 25 hours $35\frac{1}{2}$ minutes, with a maximum in one instance of 67 hours. The average time after death at which water was discovered in the trachea was 30 hours 22 minutes, if we exclude 3 bodies in which it was present in this situation; in the one 10, in the second 24, and in the third 56 days after death. With this exception, then, we are scarcely entitled to look for either of these signs of drowning in the vast majority of instances of this class.

Of the especial indications of death by drowning, *water in the stomach* was the oftenest met with in our cases, having been so in nearly 68 per cent. of these. We have, indeed, reason to con-

* In arguing here against the admission of any other mode of death by drowning than that of direct asphyxia, we do not mean to deny that persons may perish in water by syncope or coma in the circumstances pointed out by different writers. All we contend for is, that such cases are not to be regarded as instances of death by drowning (see Taylor's Elements of Medical Jurisprudence, vol. i. p. 104).

† Ed. Med. and Surg. Journ. vol. xlvii. p. 66, note.

clude that this sign would be still oftener encountered on such occasions, but for the readiness with which the fluid makes its escape from the stomach in the removal and the undressing of the body on its first discovery. Water, too, is to be found in this viscus at late periods after death. But the value of this indication is exceedingly lessened on various accounts. Not to speak of the entrance of water from without into a decaying corpse at ordinary depths,—the possibility of which we are inclined to distrust,—and the objection that it may have been taken into the stomach during life in the usual way, we have been most disappointed from our finding the fluid of a heterogeneous character from its admixture with the secretions or food in the stomach. Clear and unchanged water was only noticed by us in the stomach in 5 of our inspections.

Those appearances in the bodies of the drowned which point merely to death by asphyxia, generally are of a less temporary and evanescent sort than those of them that are indicative of its special mode of production; yet these have no very lengthened period of duration after death, even assuming—as we are not entitled to do—that they had been equally developed at the onset in every case of drowning. The superficial parts of the body, especially those about the head, face, and upper part of the trunk, continue longest to exhibit well-marked indications of their originally congested condition (vide Pt. II. § 13); but these at length, by a prolongation of the stay of the body in water, are found to disappear. Previous to this, and at a comparatively early stage of the process of decomposition, the traces of vascular fulness have begun to disappear from the encephalon, right heart, lungs, liver, spleen, kidneys, and alimentary tube (vide Pt. III. §§ 4, 8, 10, 11, 12, 13), leaving in the end nothing to enable us to judge of their condition.

We need do no more than allude here to the well-known effects of advanced putrefaction, and of the prolonged stay of the body in water, in obliterating traces of violence from the soft parts, and in withdrawing or rendering uncertain the negative evidence which the absence of ordinary disease is fitted to afford for enabling us to judge of the real cause of death in many cases of suspected drowning.

For much of the information which we possess in regard to the changes which the human body undergoes after death in different media we are indebted to the researches of Orfila, Lesueur, and Devergie. While freely acknowledging our obligations to these eminent authorities, it behoves us, however, to adopt with great circumspection some of the deductions derived from their observations relating to the phenomena of putrefaction. This remark applies with special force to the attempt made by the last of these authors to fix with precision the order of succession of the changes of the body in water, and to assign precise limits to the periods of their appearance at the different seasons of the year. On a previous occasion* we were enabled to apply the test of experience to several of the data assumed by Devergie for the determination of the time of the stay of the body in water, from the study of the different phases of the putrefactive process. The assistance which we have since derived from more extended observation has only served to confirm us in our opinion as to the too hasty character of his inductions on this point. Still we are equally of opinion that, in this country at least, Devergie's views have been received with more dislike and distrust than their importance deserves, and that a series of observations on the plan we have adopted (vide Pts. II. and III. pass.), *if sufficiently extended, and guarded from some obvious sources of fallacy*, might in time lead us to the adoption of rules for our general guidance in judging of the time of the decease of drowned persons, where this could otherwise be only a matter of pure conjecture.† Of course, *approximations* only; and these not very close, could thus be ever expected to be arrived at; but even these would not be without their use on several occasions of importance in real practice.

But to conclude. If, as we have

* Edinburgh Medical and Surgical Journal, vol. xlvii. p. 66.

† The danger of hasty generalisations on this point has of late been strikingly shown by the publication in the MEDICAL GAZETTE (vol. xlv. p. 17) of a case by Dr. Taylor, where decomposition had shown itself unusually early in a dead body. The same thing will be evident from the consideration of some of the calculations in the preceding papers. It is to be observed, however, that the fact is established that the changes of the body in water are less liable to extreme variations in point of time than those which occur in it while decaying in the atmosphere or under the earth.

shown, the marks of death by drowning become less certain as time has been suffered to elapse before the examination has been instituted, it may be asked us on what grounds we have set down many of our cases as instances of death by drowning? To this we have no hesitation in replying that we have only done so because in all of them we were in possession of both *moral* and *medical evidence* pointing in the same direction, and the one supplementing the other. Thus it frequently happened that, where the medical evidence did not authorise us in doing more than deciding as to the *probability* or bare *possibility* of the death having been the result of submersion in water, the circumstantial evidence elicited in the investigations set on foot by the police and the law authorities left no room for doubt or hesitation as to the mode and manner of the death of the party.

ON THE OCCURRENCE OF A MUCO-PURULENT DISCHARGE FROM THE VAGINA,

AS A CONSEQUENCE OF SMALL-POX.

BY ROBERT BARNES, M.D., LOND.

Lecturer on Obstetrics; Obstetric Surgeon to the Western General Dispensary.

IN the MEDICAL GAZETTE for July 12th, 1850, I described a new form of leucorrhœa, which I had observed to arise as a consequence of inflammation of the vagina, and in all probability of the os and cervix uteri in connexion with scarlatina. I cited the testimony of Dr. Tweedie and Dr. Miller, to show that this point in the pathology of eruptive diseases had not been previously recognised; and I also especially referred to the "importance of determining the possibility of a muco-purulent discharge occurring as a consequence of scarlatinal vaginitis," as ignorance of such a relation might lead to erroneous and mischievous conclusions.

Since the publication of the paper referred to, the observations therein made have been confirmed. In a subsequent number of the MED. GAZ., Dr. Cormack reports that he had in several instances witnessed a leucorrhœal discharge from the vagina as a consequence

of scarlatina. Dr. Graves of Dublin also, in a letter dated Jan. 21, 1851, says, "I can confirm your observation, having frequently seen the discharge from the vagina you speak of."

Evidence so direct, from authorities so deservedly respected, must place the reality of scarlatinal vaginitis in the rank of established facts.

In the same paper I further suggested, on analogical grounds, that "a muco-purulent discharge from the vagina may also arise in connexion with small-pox and other exanthematous diseases, which affect large tracts of mucous membrane as well as skin."

Since then a case has come under my observation, which bears out this proposition also. On May 6th, 1851, a child six years old was brought to me at the Western General Dispensary, suffering from profuse purulent discharge from the vagina, excoriations of the labia resulting from the acrimony of the discharge, and inflammation extending up the vagina. Two months previously the child had small-pox. When convalescent she complained of acute pain, especially on sitting down; this led to an examination by a woman who had charge of her, when the inflammatory condition described was first seen. Close inquiry could discover no other cause of the vaginitis than the small-pox: no discharge had been observed previously to its accession. Little doubt can exist that the vaginitis took its origin, or persisted on the decline of the variolous attack, and had been overlooked until excoriation had occasioned pain.

By the use of a lotion of nitrate of silver twice a day, and frequent ablution, the inflammation was subdued in about ten days.

Because hitherto unnoticed it ought not to be concluded that such cases are rare and exceptional. Another form of the disease, in which the inflammation of the vagina assumes such severity as to become the all-absorbing feature, has been described by several authors. Dr. Macintosh has observed ulceration and gangrenous inflammation of the vagina after measles. Duges describes an epidemic, which occurred at the Hôpital des Enfants Malades, characterised by the same circumstances. Professor Fergusson recently recorded several cases of occlusion of the vagina from ulceration after

measles. Something unusual in the character of the prevailing epidemic, or in the constitution of the patient, must be present to lead to such formidable results; but the milder form of rubeolar, scarlatinal, and varioloid vaginitis, to which I wish to draw attention, is perhaps far from infrequent in ordinary epidemics; and if not entailing consequences fatal or even grave, may yet be attended with consequences of no trifling concern to the patient or to others.

I again insist that the true origin of leucorrhœa arising in this manner may be overlooked, and mistaken for blennorrhagia, and thus serve as a foundation for false accusations of criminal violence. It may also be the starting-point of persistent leucorrhœa, and lead to confirmed inflammation and hypertrophy of the cervix uteri. The etiological error may be avoided, and the disease readily subdued, if early detected.

I therefore think that I am justified in proposing a rule to be observed in practice, viz.—in all cases of exanthematous fevers occurring in females, to institute strict investigation into the state of the vaginal canal, especially at the period of decline of the febrile symptoms.

63, Gloucester Terrace, Hyde Park,
August 11th, 1851.

A CASE IN WHICH THE OPERATION OF TRACHEOTOMY WAS PERFORMED UNDER THE INFLUENCE OF CHLOROFORM.

BY HENRY SMITH, Esq., F.R.C.S.
Surgeon to the Westminster General Dispensary.

At 11 A.M., on the 11th of August, I was requested by my friend Mr. Welch, of Blackmoor Street, to see an interesting little girl of four years old who was suffering so severely from croup, that it was deemed needful, as giving a chance of life, that the windpipe should be opened. On seeing the patient I found her labouring under the most severe symptoms of that formidable disease. The breathing was very laborious, the child was very restless, rolling about in its mother's lap for the purpose of getting ease, and there was a troublesome cough, accompanied with the harsh sound observable in this disease. Nevertheless,

the countenance, although anxious, was not livid; the chest expanded pretty well, and the voice was pretty distinct. I learned from Mr. Welch that the patient had been ill for nearly a week, but that the well-marked signs of croup had only been noticed on the 8th, four days previously. The usual treatment had been put in force without any diminution of suffering. I must not omit to mention that the tonsils were enlarged, but that there was plenty of room for the air to get into the larynx.

It appeared to me that the case was not sufficiently urgent to justify tracheotomy; and, as the child was not much depressed, it was agreed that this procedure should be postponed until the effect of more leeches to the throat, and further doses of tartar emetic and calomel, had been observed.

At midnight I was again summoned, with an intimation that the child had become much worse, and that it appeared likely that it might not live during the night, and at the urgent wish of the parents that the operation should be performed, Mr. Welch and myself visited the patient. On our arrival we found the child lying on its back asleep, and breathing without great difficulty; we waited half an hour until she awoke, when she was seized with violent convulsive cough, dyspnoea, and became very restless: still the very fact of her being able to lie asleep in an apparently easy state, was, in my mind, of itself a contraindication to the operation of tracheotomy, and I therefore declined doing it, and it was agreed that the remedies should be continued, and that we should at least await until morning.

At 11 A.M. next day, it was evident that the child was worse, and that if the operation was to be of any service the time was now come. The chest no longer expanded well. The breathing was extremely laborious, the muscles of the neck which assist it were in full action, and the lower ribs on each side were drawn forcibly inwards. The voice had become quite lost, and the powers of the child were becoming feeble. There was considerable rhonchus over the lower part of the right lung, but the greater portion of them seemed to be pretty healthy: this had been more clearly ascertained the day previously, when the air entered the lungs more freely. It was now decided that a powerful emetic dose of antimony

should be given, and that if no benefit arose, the operation should be done. The emetic acted, but seemed to have no good effect. Thereupon I requested the advice of my friend Dr. Snow, with respect to the administration of chloroform. Although I had my own doubts as to the propriety and even safety of giving this agent when there already was so much obstruction to the respiratory process, the important organs already much congested, and where it was very likely that blood would get into the windpipe, and tend to cause immediate death during the operation, still my anxiety that this interesting little child should be free from the torture of the operation, led me to act according to the advice of Dr. Snow. This gentleman carefully examined the patient, and offered to administer the agent. It was given with great caution, and we had the happiness of seeing the child brought completely under its influence, and kept so nearly as easily as though nothing were wrong with its breathing. Whilst the child remained insensible I opened the trachea, and on doing so a large quantity of mucus, and a great portion of false membrane, were ejected by the wound. Of course, for a short time, there was considerable disturbance, but as soon as this was over, the child lay down, breathed quietly and tranquilly, and it was pleasing to behold the contrast to what it was before. At 10 P.M., the child was visited by me; it had been breathing very tranquilly; the tube in the trachea had kept perfectly clear, and nourishment had been taken. Just at the time I saw it, the patient was very restless, and thinking that it would be desirable to procure some sleep, I ordered two minims of liquor opii sedativus, to be given at once, and repeated at midnight if it was very restless.

Aug. 13th, 10 P.M.—The child has passed a fair night, and has breathed and breathes with the utmost tranquillity; but within the last few hours it has lain in a heavy state of half sleep, but it recognises persons, and is easily roused up to take nourishment; the bowels have been well opened; the neck and face were very much swollen, and an erysipelatous blush had commenced to show itself near the wound. During the day the breathing was easy and tranquil, but the stupor in which the child lay became more deep; mus-

tard poultices were applied to the calves and thighs, but death gradually and quietly drew on, and did its work at 4 A.M. next morning, near 40 hours after the operation.

In company with Mr. Welch, and my friend Mr. Hulme, I made a careful examination after death. Beginning from the entrance to the respiratory apparatus, the tonsils on either side were found to be enlarged to some extent, and they were covered on their surface with a whitish deposit, but there was ample room between them. The inner surface of the epiglottis, and here and there the larynx, were studded with the same, whilst the whole of the trachea below the wound was lined with a thick layer of false membrane, which was pulled away entire, and on this being removed the mucous membrane was seen to be intensely inflamed. This deposit also lined right and left bifurcation, and we could follow it down distinctly into the multiple ramifications of the bronchial tubes. The lower portions of the lungs, but more especially the right lobe, were considerably congested, but the upper parts comparatively healthy.

I was anxious to ascertain the condition of the brain; this organ was healthy, there was but slight congestion, and no subarachnoid effusion, or fluid, within the lateral ventricles.

I should not have published this case,—for unfortunately the history of the operations of tracheotomy in inflammatory croup generally tells the same tale, the finale being that the little patient dies either during the operation, or gets some relief and expires after a few hours, in a less distressing manner to itself and to its parents,—but the circumstance of chloroform being inhaled in this instance lends a more than ordinary amount of interest to the case. It is well known that great objections are entertained against giving this agent when operations of a severe nature are to be performed either about the mouth and jaws, or region of the throat; and some surgeons do not deem it by any means safe to employ it in such. It has been assumed, that when operations are performed in these localities under the influence of chloroform, the larynx becomes as it were paralysed, and insensible to the stimulus of any blood which may

be liable to get into the windpipe, and thus the patient may die from suffocation. If this objection really held in instances where operations are performed for the removal of the upper or lower jaw, it would obtain in a greater degree in tracheotomy, which proceeding is put in force only in instances where there is already great obstruction to respiration, and moreover, great congestion in the lungs and brain. The danger would appear *a priori* to be far greater here. However, it has fallen to my lot to witness the effects of chloroform in operations in these localities, and the danger, when the agent has been skillfully employed, has appeared to me to be only assumed, and not real. I was anxious that it should be tried in the present case, and therefore was glad to avail myself of the experience of Dr. Snow: this gentleman considered that there would be no danger in using chloroform, and having the most perfect confidence in his judgment, I gladly acceded to his wish; and was much pleased with the beneficial manner in which it acted, during a somewhat protracted operation. I believe that this is the first instance, (at least made public,) in which the operation of tracheotomy has been performed under the influence of chloroform. I made inquiry of Dr. Snow, who has had a vast experience in its use, and also requested him to state his reasons for not fearing its employment in such a case. In answer, he sent me the following note, which he has kindly permitted me to append:—

MY DEAR MR. SMITH,—I beg to say in answer to your inquiries, that I am not aware that chloroform or any similar agent has been given in the operation of tracheotomy, except in the case of your little patient. I believe that many medical men would have objected to the employment of chloroform during tracheotomy, or a case in which extreme difficulty of breathing existed, but the following are the reasons which induced me to recommend it, when you asked my opinion on the subject:—1st. Chloroform in moderate quantities does not diminish the strength of the respiratory movements. 2nd. I have ascertained by experiments on animals, that a larger quantity of air is not required to support life under the influence of chloro-

form and other narcotics than in ordinary circumstances, but, on the contrary, that they can actually subsist on less air than in the normal state. And 3rd, the struggles of the child that would be occasioned by pain and fright, if the operation were performed in the conscious state, would cause an increased demand for breath, and be a real source of danger.

The vapour was given very slowly at first, in order not to embarrass the child by its pungency, and the result of its administration fully realized our expectations. The patient was quiet and passive, and the difficulty of breathing and blueness of the lips were certainly not increased by the chloroform.

I remain,

Yours very truly,

JOHN SNOW.

54, Frith Street, Soho.

I will add nothing more to the clear and forcible remarks here made, but will only take this opportunity of acknowledging my gratitude to Dr. Snow for the great assistance which he has rendered to me, not only in this instance, but in several other serious operations.

13, Caroline Street, Bedford Square.

HOSPITAL FOR INEBRIATES.

A HOSPITAL for the custody and treatment of inebriates is very much needed. There can be no doubt that if one was established, and properly appointed, much good would result from it. It is well known that there are many persons who possess such a hankering for alcoholic drinks, that it is almost impossible for them to resist the temptation to indulgence when such drinks can be procured. Now it is to these individuals that a retired hospital would be of essential service; for such appetite is a *disease*, or it produces one, and often requires medical as well as moral treatment for its cure. Our insane asylums have many such cases, and the greatest benefits have been derived by the temporary confinement and other treatment which such patients are there subjected to; yet it is not the proper place for them after all. If some of our medical friends would undertake to establish a private hospital of the kind referred to, we have no doubt they would be fully remunerated for the outlay in a very short time.—*Boston Med. Journal*, July.

MEDICAL GAZETTE.

FRIDAY, AUGUST 29, 1851.

From the report of certain proceedings elsewhere inserted,* it will be perceived that the MEDICAL OFFICERS of the HOSPITALS FOR THE INSANE in Great Britain, have associated themselves for the purpose of watching over this branch of professional practice both in its medical and legal relations. The interest felt in the subject is sufficiently evinced by the numerous and respectable assemblage met for this useful and beneficial purpose: and we anticipate that success must attend exertions so well commenced and so earnestly followed out.

Although the laws affecting lunatics have been revised and consolidated within only a recent period, it is a generally admitted fact that in many respects they are defective, and that in some instances they do not protect sufficiently the civil rights of the professional and trading classes of society. The combined experience of many practitioners will have an excellent effect in demonstrating to our legislators that questions affecting the rights and interests of lunatics should not be left wholly to the discretion of mere lawyers. They have had a fair monopoly of law-making on the subject for the last quarter of a century; and, until the late law was passed, the protection of lunatics rested from year to year upon acts intended to amend, explain, and prolong other acts. The meaning of the law was confused, and its operation inadequate to protect rights and to check abuses. We have no doubt that the Committee appointed at this meeting will point out these ambiguities and defects; but, in

order to ensure the application of a remedy, they must be careful to establish by *cases* that the grievances are of a real, and not of a hypothetical kind.

The suggestion that Criminal Lunatics should have a separate and distinct asylum prepared for their reception, deserves the serious attention of the Government. It has always appeared to us an anomaly that Criminal Lunatics should be confined in an asylum which is also used for the reception and treatment of those who have become insane through disease. We are informed on competent authority, that the plan of having a great central asylum has been carried out in Ireland, and that it has admirably answered the intended purpose of relieving the general asylums of the criminal insane, and of bringing together, under one system of management and superintendence, those who fall under the same class. The charge of preparing a petition on this subject has been entrusted to Dr. Williams of the Gloucester Hospital.

The Medical Officers at this meeting did not confine themselves to words, but manifested by their acts that they were in earnest regarding the management of those unfortunate beings who fall under their care. It was resolved that the members should personally visit and inspect the new Hospital for the Insane at Colney Hatch,—the Asylum for Idiots at Highgate, and also Bethlehem Hospital. These various institutions were subsequently inspected by a large body of the Medical Officers, who appear to have been well satisfied with their reception, and with the management of these establishments. This kind of supervision must be productive of greater benefit than official inspection at stated times by non-professional persons.

Of all the grievances connected with the civil rights of the insane, that relating to the costliness of *Commissions* is one which requires immediate re-

* See page 388.

moval. As an offshoot of Chancery proceedings, we need not tell our readers that we are dealing with a gross and scandalous abuse in a pecuniary sense. The rules appear to have been constructed on the principle that the property of a lunatic belonging to the middling or lower classes, whether in a profession or a trade, never could require to be legally protected from waste or misuse. Hence a commission of lunacy, to determine whether a person be or be not competent to manage his property, may vary in cost from three hundred to three thousand pounds, and even reach a higher sum! That monster-abuse—Chancery—thus addresses the poorer class of lunatics:—"We will take charge of your property so as to prevent you from wasting it, but it is on the condition that we are allowed to take the whole, and deprive your family of any benefit in your property." There are numerous cases in which the sum requiring protection, and which may be of great moment to a family in straitened circumstances, would not actually suffice to pay the legally recognised fees! The law of Chancery "protection," with its wasteful, unnecessary and most costly machinery, is apparently made exclusively for the benefit of the rich, and not of the poor lunatic. We do not see why a fee of five pounds should not suffice to enable a properly appointed commissioner or commissioners to decide a question of this kind in reference to the middle and lower classes. The County Courts' principle, which has produced such beneficial changes with regard to the redress of private wrongs at a small cost, might, we think, be safely applied to determine whether a person be or be not competent to manage his property. Let the poor man have a qualified commissioner, and a jury of five: the friends of those who can afford it, may, if they please, still revert to the cumbrous

and expensive proceedings which now disgrace this branch of Chancery law.

We do not doubt that this and other subjects will receive due attention from the Committee of Medical Officers of the Insane, and we wish them success in their efforts to amend and ameliorate the law.

THE case of *TAYLOR versus VICKERS*, reported at page 379 of the present number, shows that, in a justly founded professional claim, a County Court may be safely appealed to, even where the amount claimed is such as to warrant an application to the Superior Courts of Westminster. As cases of this kind are not very common, we are desirous of pointing out, in a few words, the risks to which a plaintiff is exposed in prosecuting a claim in one of these inferior Courts. In the first place, the advantages are obvious,—the process is speedy, and the cost of enforcing the law trivial: the losing party has, however, a power of appeal against an adverse decision, by application to a superior judge. On the other hand, the disadvantages are great: the law gives, either to plaintiff or defendant, the option of calling *a jury*, which, in the County Court, is limited to five persons. There are no *special jury* cases in these Courts: hence a tradesman who disputes a claim of forty or fifty pounds for professional fees, may call a jury of tradesmen—men of his own class—to decide upon the merits of a question for the solution of which they may not be really competent,—not from a want of honesty and *bona fides*, but from an absence of all experience on the proper amount of charges, and from an entire ignorance of the nature and value of the services rendered.

That five tradesmen, taken at random from a common jury panel, should as fairly assess the amount of professional

fees as the judge, who is, by education and position, competent to decide the question at issue, is not very probable; and it was therefore natural, in the case referred to, that a jury should have been called for by the defendant alone. He no doubt considered that, in so large a claim, it gave him a much better chance of a verdict against a professional man, than if the decision were left to the judge. In this, however, it appears, he was disappointed: the jury, actuated only by a sense of justice, decided against the member of their own class, and in favour of the professional claim. In the superior Court, such a case would have been tried by a special jury; and although the present case does not create the necessity for suggesting an alteration, we think it is only fair to the professional classes generally, that when a tradesman, whether plaintiff or defendant, requires a jury to be empanelled, it should be at the option of the professional man to have a common or a special jury.

Another disadvantage is this:—To make out his case, even when the evidence is of a simple kind, a plaintiff is obliged to produce professional witnesses, whose time may be of very great value to them. The rules of the County Courts provide no scale of fees for the payment of such witnesses. As we are informed, travelling expenses only are allowed. An obstinate and litigious man, with not the slightest reasonable ground for resisting a claim, thus has it in his power to throw a heavy charge upon the successful claimant, or the latter must rely upon the gratuitous services of those whom he considers it necessary to call. Out of good there necessarily springs evil. The very cheapness of the process of the County Courts often induces a person to resist a just claim, because, if he loses in the action, the additional expense will be small, while the enormous costs attending the failure of a defence in the superior Courts, com-

monly lead to a speedy settlement of the demand.

One feature of this case deserves comment.—The judge laid down the law that contracts may be *implied* as well as expressed in words or writing. When the issue is, whether a man has or has not given an order for certain professional services, there is commonly no witness to the contract, and no deed executed between the parties: in such a case, the conduct of the party disputing the claim must form an element for the decision of the jury. The whole of the circumstances, also, must be taken into consideration: they may be such as to fix a defendant with a full knowledge that he was allowing another to employ his time *bonâ fide* for his benefit; that he profited by the results of such employment and took a part in the proceedings; and that he allowed a long time to elapse without taking any objection to the services rendered or the charges made. In the case already referred to, it is quite clear that the defendant paid *too much* for the *three* analyses which he said he ordered, or *too little* for the *seventeen* analyses which the plaintiff affirmed he had ordered. It was no doubt considered that, trusting to the ignorance of the jury in such matters, the twenty guineas paid into Court was a sum which they would have considered sufficient; and had no more than this amount been originally charged, it is probable that no objection would have been taken by the defendant to the actual number of analyses made.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 21st August, 1851:—John Oliver Rouse, Great Torrington, Devon—John Langdon, Bampton, Devon—Joseph William Eastwood, Chesterfield, Derbyshire—Thomas Cossar, Darlington—David Mickle, Leeds.

Reviews.

1. *Notes of a Recent Visit to several Provincial Asylums for the Insane, in France.* By JOHN WEBSTER, M.D., F.R.S., &c. (Reprinted from the "Journal of Psychological Medicine," Oct. 1850.)
2. *Report of the Pennsylvania Hospital for the Insane.* 1850. By THOMAS S. KIRKBRIDE, M.D.
3. *Annual Report of the Royal Edinburgh Asylum.* 1850.
4. *Medical Report of the Aberdeen Lunatic Asylum.* 1850.
5. *Physician's Report of St. Luke's Hospital.* 1850.
6. *Superintendents' Report of Littlemore Asylum.* 1850.
7. *Report of the Somerset County Lunatic Asylum.* 1850.
8. *Report of the Gloucester County Lunatic Asylum.* 1850.
9. *Report of the Belfast District Asylum for 1850.*
10. *A Letter to the Governors of the Lincoln Lunatic Asylum.*

DR. WEBSTER'S paper presents several points of interest, which we shall bring under the notice of our readers, because they afford an opportunity of instituting a comparison of the treatment of the insane among our neighbours and among ourselves. Dr. Webster visited eight French provincial asylums in the autumn of last year, and has given the following statistics of these:—

| | Male. | Fem. | Total. |
|---|-------|------|--------|
| Admitted in 1849 . . . | 484 | 483 | 967 |
| Cured | 208 | 187 | 395 |
| Died | 270 | 234 | 504 |
| Population in autumn 1850 . . . | 1464 | 1902 | 3366 |
| Patients under restraint in autumn 1850 . . . | 44 | 72 | 116 |

In the general remarks which the author makes, he speaks very strongly of the advantages which result from the plan adopted in France, of having *internes*, or junior resident medical officers, attached to lunatic asylums. These officers not only acquire much knowledge and personal experience in the nature and treatment of mental disease, but are of the greatest utility, by relieving the superior officer of

many details and much professional labour to which the former are perfectly competent. There are very few such appointments in English asylums, Dr. Webster observes; but he predicts that it will not be long before such attendants will be found in every asylum. Any one who may visit the new County of Middlesex Asylum, at Colney Hatch, will be convinced of the importance of an extensive and efficient staff for such an institution. If he approach the asylum from the high ground of Muswell Hill, he will see stretched before him, rising from the valley below, and covering the opposite ascent, what appears to be a large new town—so extensive are the buildings: he will scarcely be able to conceive, on first beholding it, that this is to be the abode of a part only of the pauper lunatics of the county of Middlesex. He will, however, we think, be not a little surprised to hear that the thousand patients to be lodged therein are to be consigned to the care of *two* medical officers! It would seem to be a day's work for either merely to walk over its whole extent. Of how great benefit, then, in such an asylum as this, would be the services of several *internes*! We trust that Dr. Webster's prediction may soon be realised at Colney Hatch.

Dr. Webster points out that the high rate of mortality in the French Provincial Asylums is referable, in a great measure, to the cholera. In one asylum (Le Mans) the ratio was only 6.20 per cent. This, Dr. Webster observes, may be regarded as the index of the ordinary rate, as no patient died of cholera in that asylum.

The author notices that female patients predominated over the males at the time of his visit; the numbers being 1464 males to 1902 females. A similar feature is observable in most British asylums.

It will appear that different opinions are entertained in France, with regard to "restraint," to those which are current in England. Padded rooms are seldom met with in France. The most usual means of restraint is the camisole, or straight waistcoat. The proportion of males under restraint was 1 in 33 $\frac{1}{4}$, or 3 per cent.; of females, 1 in 26 $\frac{1}{3}$, or 3.78 per cent. At Bethlem Hospital, Dr. Webster states, during the same

period, not one out of 391 was under restraint.

Dr. Webster, with very great justice, laments the loss which is suffered by the profession through the want of publication of the reports that are annually made by the physicians to the civil authorities: these reports become buried in the archives of the prefectures, or are consigned to oblivion in some similar receptacle. It would be well if greater attention were bestowed on the preparation and publication of the reports of the asylums on this side the Channel. We have on former occasions pointed out their deficiencies.

Medical men are not much better remunerated in France than in England, it would seem, from Dr. Webster's statements, notwithstanding that we often hear Sterne's words quoted on this subject—"They manage these things better in France." This is not in accordance with Dr. Webster's observation.

Matrons are not commonly met with in French asylums. The sole management rests with the physicians; on which point, certainly, "they manage these things better in France." We hope that the visiting magistrates of the Middlesex asylums may be induced to make an "excursion" to the French asylums: they will derive a few useful hints regarding management.

The medical treatment of the insane appears to be much the same as that which is generally adopted in England.

We could willingly have extended our analysis of Dr. Webster's very entertaining and instructive "Tour," but we must now give our attention to the report of one of our Transatlantic brethren.

2. The engraving that accompanies Dr. Kirkbride's "Report" presents the Pennsylvania Asylum as a handsome and very capacious erection. The statistics of this hospital inform us that the population was, during 1850, 428, the average being 219; 106 were cured; 61 improved; 21 remained stationary; 27 died. Of these deaths, 15 resulted from pneumonia; 5 from acute mania; 3 from inflammation of the brain; 2 from apoplexy; 2 from dysentery; 2 from general paralysis; 2 from softening of the brain; 1, exhaustion from long excitement; 1, chronic uterine disease; 1, epilepsy; 1, purpura; 1,

disease of the heart; 1 from old age. One of these patients had been nearly forty-five years in the hospital.

The results of ten years in the Pennsylvania Hospital give a preponderance of the sexes the reverse of that noticed generally in French and British Hospitals. Thus:—

| | Males. | Fem. | Total. |
|----------------------|--------|------|--------|
| Admissions | 999 | 807 | 1806 |
| Discharges or deaths | 887 | 706 | 1593 |
| Remain | 112 | 101 | 213 |

Dr. Kirkbride gives an extended tabular analysis of the avocations of the patients or their parents, from which it may be perceived that no calling is exempt from this malady, nor freedom therefrom secured by want of occupation. The classes which have afforded the largest number of patients have been farmers and merchants, which, in the state of society in the Northern States of the Union, is not difficult to be accounted for. Under the head of "Social Condition," we find that, in 1806 admissions, 884 were single; and of these, the proportion of males is larger than might have been anticipated—558 males to 326 females; while, of the 776 married, there were 371 females to 395. To 110 widows there were only 46 widowers. These results are curious, and may be taken as a set-off against the statistics which give longevity in favour of the unmarried of the general population.

The ages from twenty to thirty-five exhibited the highest number of patients. This feature is observable generally in other countries also.

The relative numbers of cases of different forms of the disease will be found in Table No. II. at the conclusion of our present notice.

In the Pennsylvania Hospital employment has formed a most important therapeutic means. Farming, carpentering, and other mechanical pursuits; reading, the formation of a museum, have been among the modes of employment. To these have been added evening entertainments, lectures, instruction, &c.

On the subject of restraint, Dr. Kirkbride observes,—

"In the treatment of these patients, the amount of strict seclusion has been vastly diminished, and the use of restraining apparatus has been almost entirely abolished. Of the latter, none but a few of the mildest forms have ever been employed. Neither

straight jackets, muffs, or the so-called tranquillizing chairs, have ever been among the means used in this hospital."

This report, which we now leave to turn to those of several British asylums, is characterised by an earnest spirit, and a zealous desire to make the best of the facts in the author's possession: it carries its own proofs that the medical director has but one object in view—that is, the promotion of the welfare of the inmates of the hospital committed to his charge.

In the next place we have to notice the characters of the Reports of each of the British asylums above named.

3. The Edinburgh Asylum has received, during the year 1850, 126 males and 127 females; 78 males were discharged, and 88 females; there died 26 males and 38 females: 224 males, and 251 females, remained over from 1849. The average population was 246 males and 252 females. The per-centage of cures was 43·9 to the number of admissions, and 22·65 to the average resident population. The per-centage of cures since the opening of this institution has been 40·6 to the whole number, or 51·5, deducting those still under treatment.

A considerable number of patients are removed uncured from this as from every other asylum, public or private: the proportion, therefore, of cures in all, would be larger if the patients remained long enough. Dr. Skae observes, that an extended series of observations has shown that one-half of those who recover do so after the first year: it is therefore important that removal should not take place at too early a period. The forms of the disease have been as follows, respectively to their numbers:—mania, dementia, melancholia, monomania. The most efficient causes among those admitted to the Edinburgh Asylum have been intemperance, religious excitement, and grief.

Dr. Skae relates a few cases, very interesting in several points of view, as illustrative of some of the more striking manifestations of the disease. The mortality during the past year has been 8·8 per cent. to the whole number under treatment. The greater number have died from general paralysis or phthisis. Thus, of 64 deaths, 18 were from phthisis, 15 from general paralysis, and 11 from insanity. An analysis of the

post-mortem appearances which have been observed is given by the author.

The same occupations and amusements which we have on former occasions noticed as having been put in force in this asylum, have been continued, and have been found equally successful as hitherto.

The Report now referred to reflects great credit upon Dr. Skae's industry and ability.

4. The Report of the Managers of the Aberdeen Lunatic Asylum contains tables which present all the most important facts in an intelligible and convenient form.

36 males and 45 females were admitted during 1850; 119 males and 107 females remained from 1849. Of these there are reported—recovered, 15 m., 21 f.; improved, 5 m., 21 f.; dead, 12 m., 4 f.

The social condition of the inmates is thus stated:—Single, m. 17; f. 23; married, m. 15; f. 15; widowed, m. 4; f. 7. The order of frequency of the several forms was—mania, monomania, melancholia, and dementia. The preponderating influence of the same causes is here indicated, as was observed in the Edinburgh Report—viz., intemperance, religious excitement, and grief.

The tables in which these and other features are set forth are very full, and evidently drawn up with great care.

5. The Annual Report of St. Luke's Hospital for the Insane presents an unusual and distinctive feature of no little value and interest. Statistical tables are given relative to the admissions, discharges, and deaths of patients, during the last hundred years. The Report is moreover preceded by a brief outline of the history of the hospital.

During the year 1850 there have been admitted into St. Luke's, as curable patients, 72 males, 107 females. The cures have been at the following rate:—70·96 per cent. males; 68·32 per cent. females. Of incurables, there were admitted, 1 m., 5 f. The average weekly number of patients in the hospital has been 90 m., 107 f.

The social condition of the patients has been thus:—Married, m. 44; f. 59; single, m. 25; f. 42; widowed, m. 3; f. 6. The avocation of the greatest number has been that of servants.

The tables which report the numbers

admitted, discharged, and died, during the last century, are elaborate and highly valuable. We quote the following from the abstracts by which they are accompanied:—

Admitted from 1751 to 1850.

| | Males. | Females. |
|--------------------|------------|-------------|
| Curables | 7311 | 10778 |
| Incurables | 276 | 384 |
| | <hr/> 7587 | <hr/> 11162 |

Discharged.

| | | |
|--------------------|------------|-------------|
| Curables | 7276 | 10725 |
| Incurables | 227 | 336 |
| | <hr/> 7503 | <hr/> 11061 |

| | | |
|---------------------|----|-----|
| Remaining Dec. 1850 | 84 | 101 |
|---------------------|----|-----|

The per-centage of cures for the past century has been somewhat lower than we have shown to have existed during later periods in other asylums, and also than that of St. Luke's itself, during the last ten years. Thus additional statistical evidence is afforded of the good results of the improved and more scientific character of the treatment of the insane. The per-centage for the century is 37·15 males, 44·96 females—average, 41·83; that for the last ten years, 64·25 males, 58·41 females—average, 60·57. The amendment thus evidenced is of a most gratifying character, and greatly encouraging to those who have devoted their energies to so humane and truly charitable purposes.

An appendix accompanies this Report, containing a clear, succinct, and instructive summary of the post mortem appearances observed in every body that has been examined.

The per-centage of mortality during the century was—males, 13·09; females, 7·42—total, 9·71.

Drs. Sutherland and Philp have taken great pains to render this Report not only interesting, but extremely useful.

6. Dr. Ley, the Superintendent of the Littlemore Asylum or Union for the Counties of Oxford and Berks, has prepared a series of tables which show, from the higher proportion of cures at Littlemore, the advantages to be gained by ready admission of cases in their early stages. Thus the annual average cures for four years at Littlemore has been, on the admissions, 42·1 per cent.; in fifteen other county asylums, 30 per cent.

Dr. Ley has also given a table which

we should like to see in every other Report—viz., the seclusions during 1850. The per-centage has been, on the number resident, 5·6 males; 15·1 females. The number of patients admitted in 1850 has been—males, 59; females, 61: the numbers discharged—males, 26; females, 34; deaths—13 males, 7 females.

7. Dr. Robert Boyd, the Superintendent of the Somerset County Asylum, has again prepared an elaborate series of tables, more especially illustrative of the pathology of the cases under his charge.

8. The Gloucester County Asylum has, at the hands of Dr. Williams, presented a favourable Report, “except as to the number of deaths, which have considerably exceeded those of the two previous years.” The causes assigned are the unusually low mortality of the two preceding years, and the admission of a larger proportion of feeble and exhausted patients. The tables that accompany this Report will be quoted at the conclusion of this article.

9. The Belfast Asylum, having a population of two and three hundred patients resident, is under the care of three medical officers—a Resident Physician, a Visiting Physician, and a Surgeon-Apothecary. From Dr. Stewart, the Resident Physician, we have received the Annual Report, which, like its predecessors, is drawn up with a desire to render available to others the information to be gained from the cases therein assembled. The chief points of this Report are embodied in the following tables.*

Over and above the facts thus tabulated, we may observe that Dr. Stewart's tables show a similar excess of single over married persons, as cited from other Reports. With respect to occupations, the majority of the patients in the Belfast Asylum are farmers and labourers. The following table has also considerable interest:—

Degree of Education in 140 Cases.

| | Males. | Females. | Total. |
|---------------------|--------|----------|--------|
| Well-educated . . . | 4 | 0 | 4 |
| Can read and write | 49 | 22 | 71 |
| Can read only . . . | 10 | 39 | 49 |
| Totally uneducated | 6 | 10 | 16 |

Dr. Stewart tells an unpolite truth, when speaking of the few cases of

* Vide infra.

turbulence requiring restraint, which were, for the most part, confined to the females, who, he observes, are invariably the most difficult to manage and control, be their derangement of what species it may.

10. The directors of the Lincoln Lunatic Asylum gave to Mr. Hill the credit of the introduction of the "non-restraint" system into that asylum. As we have been the medium* of the repetition of this statement, we may observe that the letter of the Rev. W. M. Pierce, a Governor of the same institution, goes fully into the history of this great step, and informs us that to Dr. Charlesworth is due all the credit of originality, while Mr. Hill was simply one of the later associates of Dr. Charlesworth, and took his share therein when the experiment was just completed.

We have prepared the following tables from the Reports before us, that our readers may see at a glance the chief facts furnished thereby. That they are not more complete is not our fault. We cannot, however, look for accuracy, or a greater amount of information, on many desirable points, until the Commissioners of Lunacy shall require the publication of uniform reports from the Asylums under their jurisdiction. Many valuable and important facts are thus incessantly lost to society,—facts that would throw the strongest light upon the most interesting questions in the history of Insanity. Imperfect as they are, we trust that nevertheless the preceding extracts and the following tables will enable our readers to form a comparative opinion of the results of practice in the Institutions thus brought before them.

LE I. Showing the number of Admissions, Discharges, and Deaths in several Asylums, 1849-50.

| | | | Admitted. | | | Cured. | | | Died. | | |
|---------------------------------------|-----------------------|--|-----------|-----|-------|--------|----|-------|-------|----|-------|
| | | | M. | F. | Total | M. | F. | Total | M. | F. | Total |
| French. | Bon Sauveur | | 60 | 63 | 123 | 42 | 30 | 72 | 31 | 21 | 52 |
| | St. Meen | | 47 | 44 | 91 | 22 | 15 | 37 | 24 | 25 | 49 |
| | Nantes | | 70 | 56 | 126 | 25 | 25 | 50 | 56 | 44 | 109 |
| | St. Gemmes | | 69 | 57 | 126 | 32 | 39 | 71 | 39 | 31 | 70 |
| | Le Mans | | 41 | 33 | 74 | 15 | 20 | 35 | 8 | 8 | 16 |
| | Blois | | 26 | 60 | 86 | 13 | 10 | 23 | 8 | 7 | 15 |
| | Orleans | | 71 | 66 | 137 | 20 | 11 | 31 | 48 | 45 | 93 |
| | St. Yon | | 100 | 104 | 204 | 39 | 37 | 76 | 56 | 53 | 109 |
| Pennsylvania | | | | | 207 | | | 106 | | | 27 |
| Edinburgh | | | 126 | 127 | 253 | 47 | 64 | 111 | 26 | 38 | 64 |
| Aberdeen | | | 36 | 45 | 81 | 15 | 21 | 36 | 12 | 4 | 16 |
| St. Luke's (London) | | | 73 | 112 | 187 | 44 | 69 | 113 | 4 | 13 | 17 |
| Littlemore (Oxon and Berks) | | | 59 | 61 | 120 | 24 | 32 | 56 | 13 | 7 | 20 |
| Somerset | | | 63 | 68 | 131 | 6 | 10 | 16 | 10 | 2 | 12 |
| Gloucester | | | 39 | 52 | 91 | 10 | 23 | 33 | 24 | 12 | 36 |
| Belfast | | | 68 | 66 | 134 | 33 | 48 | 81 | 22 | 7 | 29 |

TABLE II. Principal Forms.

| | Pennsylvania. 10 years. | | Edinburgh. | | Aberdeen. | | Somerset. | | Gloucester. | | Belfast. | |
|-----------------------------|----------------------------|-----|------------|----|-----------|----|-----------|----|-------------|----|----------|----|
| | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. |
| Mania | 475 | 414 | 28 | 41 | 17 | 26 | 24 | 39 | 14 | 20 | 35 | 36 |
| Melancholia | 207 | 220 | 13 | 17 | 6 | 10 | 9 | 9 | 13 | 17 | | |
| Monomania | 159 | 99 | 25 | 24 | 6 | 6 | 4 | 5 | | | 28 | 31 |
| Dementia | 151 | 70 | 20 | 25 | 4 | 3 | 8 | 9 | 62 | 76 | 6 | 4 |
| Idiocy | | | 2 | 0 | 3 | 0 | 4 | 0 | 2 | 2 | | |
| Epileptics | | | 4 | 2 | | | 4 | 3 | 23 | 13 | | |
| General Paralysis | | | 13 | 3 | | | 4 | 1 | 8 | 5 | | |

* See MEDICAL GAZETTE, vol. xlv. p. 417.

TABLE III. *Causes of the Disease.*

| | Moral. | | Physical. | | Hereditary. | | Unknown. | |
|-----------------------------------|------------------------|-----|-----------|-----|-------------|----|----------|-----|
| | M. | F. | M. | F. | M. | F. | M. | F. |
| Edinburgh | 41 | 41 | 59 | 37 | | | 27 | 45 |
| Aberdeen | 5 | 7 | 26 | 30 | 6 | 5 | 4 | 3 |
| St. Luke's | Moral and physical. | | 44 | 75 | 22 | 25 | 6 | 7 |
| Littlemore (causes not specified) | | | | | | | | |
| Somerset. | 23 | 19 | 24 | 31 | 7 | 11 | 9 | 7 |
| Gloucester. | 12 | 33 | 10 | 22 | 11 | 17 | 20 | 8 |
| Pennsylvania (10 years) | 254 | 236 | 366 | 188 | | | 408 | 340 |
| Belfast | 13 | 20 | 25 | 8 | 7 | 12 | 21 | 31 |

TABLE IV. *Causes of Death.*

| | Edin- burgh. | | Aber- deen. | | St. Luke's. | | Little- more. | | Somer- set. | | Glouces- ter. | | Belfast. | |
|-------------------------------------|-----------------|----|----------------|----|----------------|----|------------------|----|----------------|----|------------------|----|----------|----|
| | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. |
| Diseases of brain or spinal cord | 14 | 3 | 8 | | 2 | | 9 | 2 | 18 | 7 | 23 | 5 | 6 | 1 |
| Diseases of the chest | 7 | 18 | 1 | 1 | 2 | 4 | 2 | 2 | 3 | 5 | 2 | 1 | | 3 |
| Diseases of the abdomen, &c. | 4 | 8 | | 2 | | 2 | 1 | 1 | | 2 | | 1 | 6 | |
| Fever, &c. | | | | | | 1 | 2 | 1 | | | | | | |
| Old age and exhaustion | 1 | 8 | 5 | | 5 | 1 | 1 | | | | 1 | 3 | 7 | 5 |

Medical Trials and Inquests.

BROMPTON COUNTY COURT.

August 21.

(Before Andrew Amos, Esq., Judge,
and a Jury.)ACTION FOR RECOVERY OF FEES FOR CHE-
MICAL ANALYSES. IMPLIED CONTRACTS.*Taylor v. Vickers.*

MR. ROBERT BAKER, solicitor, stated the case on the part of the plaintiff. He said this action had been brought by Dr. Alfred Taylor, Professor of Chemistry at Guy's Hospital, against Mr. James Vickers, a dealer in and importer of Russian isinglass, for the recovery of a balance of £43. 10s. from the defendant, for certain analyses undertaken by his order and for his benefit.

It appeared that during the year 1850, the defendant had reason to believe that his trade in isinglass was much injured by the sale of what he alleged was a spurious article; and he charged certain parties with selling a mixture of isinglass and gelatine as genuine Russian isinglass. In order to make out this charge, he applied to three chemists, who reported on the alleged

adulteration; but, for some reason or other, he wished to confirm or corroborate their views, and in December last he consulted the plaintiff, and placed the matter in his hands, so that it might undergo a full investigation. The jury would hear from the plaintiff the nature of the instructions given: as he was informed, and as it appeared from a paper before him, no fewer than seventeen samples of isinglass and gelatine had been analysed by the plaintiff. Of these a minute analysis had been made of twelve samples, while the remaining five had undergone only a general chemical and microscopical examination. The analyses occupied a period of six or seven weeks—about three days a week being devoted to the necessary investigations; and during this period, as it will be shewn by the evidence of plaintiff and his assistant, the defendant made frequent visits to the plaintiff's laboratory, approved of his proceedings, and suggested at different times various modifications of and additions to the experiments. On two or three occasions, Mr. Devonshire, the defendant's solicitor, attended with the defendant, and from what was shown and explained to him by the plaintiff, he was enabled to draw up a statement for the opinion of counsel, which resulted in the advice that no legal

proceedings could be taken by Mr. Vickers against his competitors in trade; and that so far as these analyses went, there was a want of evidence to establish in a conclusive and satisfactory manner, the alleged fraud of a dulterating isinglass with gelatine.

Full reports of the results of these chemical investigations were sent to the defendant on the 10th April. An account of the costs of the analysis was sent to him on the 21st May, in which, for various lengthy consultations with Mr. Vickers and his solicitor, a sum of £9. 9s. was charged; and the seventeen samples of isinglass and gelatine were charged at the rate of *two guineas* per sample,—making £35. 14s. From the total £45. 3s., a deduction had been made for isinglass supplied to the plaintiff, leaving the balance now sought to be recovered, as already stated, £43. 10s. The defendant took no notice of the Reports or of the account, and it was not until the 18th June following, that, in reply to a letter addressed to him by the plaintiff, he stated that he must consider how far he was responsible for the whole amount charged, and that he had authorized the analysis of *three* samples only. Proceedings were then taken to recover the amount. The defendant had met them by paying twenty guineas into Court; and it would be for the jury to decide whether that was a proper and satisfactory remuneration to the plaintiff for the services which he had rendered to the defendant.

ALFRED SWAINE TAYLOR deposed that he was Professor of Chemistry at Guy's Hospital, and that he had been so for a period of twenty years. He knew the defendant, who called on him shortly before the 10th December last, in reference to an analysis of two samples of isinglass which witness had then recently made for Messrs. Dakin, of St. Paul's Churchyard. The defendant stated that one of the samples, on which a favourable report had been given by witness, was a sample of his Russian isinglass. He further said he wished to have a more extended investigation made, especially in reference to the adulteration of isinglass with gelatine, and that a Mr. Berkeley would deliver to witness two samples, procured from well-known dealers, for an analysis and report. Defendant met witness by appointment at the Chemical Laboratory, Guy's Hospital, on the 10th December, when the defendant brought with him numerous samples of isinglass (Russian and Brazilian), in the cut and uncut state. Some experiments were performed with these at the time, and a comparison made with the two samples analysed for Messrs. Dakin; but defendant then gave no order regarding their special analysis. On the 14th December two

samples were delivered by Mr. Berkeley to witness for analysis, according to defendant's order, and subsequently a third sample. When the analysis of these three samples was nearly completed, defendant met witness, and then stated that he wished the different chemical processes performed on the three samples to be performed on those brought on the 10th December, as well as on two samples of gelatine. The weight of ash and the nature of the ash in each case, formed part of the analysis, and defendant saw and compared some of the ashes. He witnessed either the experiments, or the results of the experiment, on each sample, and at this time took no objection to the proceedings. Subsequently five other samples of isinglass were adulterated with various percentages of gelatine, by the advice of defendant's solicitor, and then were examined chemically and microscopically by witness. Mr. Devonshire, the defendant's solicitor, examined them by witness's microscope in his presence, and it was through this examination, as witness believes, that the solicitor was enabled to draw up a correct statement for the opinion of counsel. The witness then, in answer to questions put by the Court, described the differences between isinglass and gelatine, and the various steps of the analysis which he had made.

In *cross-examination*, he stated that the analysis for Messrs. Dakin was not so minute as that required by the defendant; that the experiments on the samples made on the 10th December were not charged in his analyses, which were separate and distinct; that he did not know why the numerous samples of the 10th December were brought to him by the defendant, if not for analysis; that the order for this analysis was not given until after the two samples had been examined and the evidence of adulteration was not so conclusive as the defendant supposed; that during the seven weeks, the defendant had paid him frequent visits at the laboratory, and although he knew he was occupying his time in the analysis of the samples of the 10th December, he did not offer to stop him, and he saw that several of these samples were entirely used in experiments some of which the defendant had himself suggested.

THOMAS ANDREWS stated that he had been chemical assistant to the preceding witness for a period of twenty years. Remembered the defendant coming to the laboratory some time in December last, and giving orders concerning the analysis of numerous samples of isinglass; that he, by the request of the defendant, had weighed out quantities and assisted plaintiff in performing experiments with the whole of these samples; that plaintiff was always

at the hospital three times a week for about six or seven weeks, and frequently four times; that he was engaged almost exclusively in this analysis, coming about nine o'clock in the morning, and with the exception of the hour occupied by the lecture, working at these experiments until four o'clock or later; sometimes until it was impossible to see. The defendant frequently came to see the results; and on two or more occasions he came with his solicitor. The consultations sometimes occupied three or four hours; and witness twice received from defendant half-a-crown for the trouble which he had given him in the experiments performed at these consultations.

ARTHUR AIKIN had been associated with plaintiff as joint professor of chemistry at Guy's Hospital, for a period of twenty years. He remembers defendant making several visits to the laboratory in December and January last. He was in consultation with plaintiff on these occasions, and the investigations were directed exclusively to the analysis of isinglass. Witness was consulted on several occasions by both parties, and he gave his opinion when asked. Saw a large number of samples under examination, and has no doubt they were examined for the defendant, as he was frequently there, and the results of the experiments were sometimes shown and explained to him in witness's presence. Has seen the notes of analysis, and the account of fees on the amount of which he was consulted by the plaintiff at the time of drawing up the account. Thinks the charges fair and just, and that the analyses in a practical view were of a useful kind.

WILLIAM THOMAS BRANDE deposed that he had examined the tabulated results of the plaintiff's analyses, and had also seen the account. In his opinion, considering the standing of the plaintiff, the charge of two guineas per sample was exceedingly reasonable. He had been employed with plaintiff in various analyses. The fee received by scientific chemists was usually five guineas a day. The analyses were such as would be likely to be required by a dealer in isinglass, and were in his judgment necessary and proper.

JOHN THOMAS COOPER has been a practical chemist for twenty years, and frequently engaged with Dr. Taylor in chemical analysis. Has seen the notes of the analyses and the account; thinks the charges exceedingly reasonable; if the plaintiff had employed him, he should have made a much higher charge for the same amount of work.

JAMES VICKERS, the defendant, was called by the plaintiff. He admitted that several letters produced were in his handwriting.

This was the case for the plaintiff.

The DEFENDANT, after directing the attention of the jury to some points in contradiction of the evidence for the plaintiff, which, however, he admitted were not very material, asserted that he had not authorised the plaintiff to analyse more than the three samples handed to him by Mr. Berkeley. For these three he held himself to be responsible, and he had accordingly paid twenty guineas into Court, which he thought sufficient to cover the fair and reasonable charge for the analysis. The remaining samples which had been analysed by the plaintiff had been analysed for his (plaintiff's) own information and instruction, in order that he might become acquainted with the differences among the commercial varieties of isinglass known in the market, and he contended that he could not be fairly made chargeable with these supplemental analyses.

A letter was then produced and read, in which the defendant admitted he had written to plaintiff to "persist in the analysis" of three of the samples in dispute, especially to compare one (that marked Levy) with Brazilian Isinglass; but he considered that this was to add to and perfect the analyses which plaintiff had already performed for Messrs. Dakin, and not for his, defendant's, benefit.

In *cross-examination* he admitted that he had received a special report on this sample, as also on all the other samples in dispute. He had witnessed some of the experiments, and had had all the results fully explained to him, but still he contended he had ordered only three samples to be analysed, and could fairly be charged only with the analysis of three. He admitted having received full reports of results on the samples which he had ordered, as well as on those which he had not ordered; this was on the 10th April last. He made no objection to the extent of these reports at the time, but the account of fees did not accompany them, or he should have returned it to plaintiff in a few hours. He received the account of fees on the 21st May; and the first time at which he made any objection to the account, was in a letter written to plaintiff on the 18th June, a month afterwards. He did not make an earlier objection, because he required time to consult friends. The letter which he wrote was in reply to an application for payment by the plaintiff.

MR. DEVONSHIRE, the solicitor for the defence, recommended the jury, as the statements of plaintiff and defendant were in some respects conflicting, to discard their testimony altogether, and then there would be on the part of the other witnesses an entire want of evidence in support of this

claim. He contended that there was no proof whatever that defendant had ordered the analysis of more than three samples, and as he had paid twenty guineas into Court there was an ample remuneration for the services actually rendered.

The JUDGE directed the Jury that the issues which they had to try were three in number, and of a very simple kind:—1. Were these analyses likely to be at all necessary or serviceable to the defendant; 2. Were they ordered by him; and 3. Were the charges just and recoverable, such as would be made by one occupying the position of the plaintiff as a scientific chemist? On the first and last points they had had the opinions of some of the most eminent chemists in Europe; and these gentlemen were unanimous in thinking that the charges were even lower than those which they themselves would have made. As to the second question, the jury must know that a written contract is not necessarily required for services of this kind: there may be an *implied* contract, as where a man leaves or sends samples for analysis, where he attends frequently to see results, and suggests various modifications. Under such circumstances, it would be for them to consider whether there was not sufficient evidence of an implied order for the analysis on the part of the defendant; and whether it was likely a gentleman in the plaintiff's position would occupy himself for twenty days in these numerous researches on isinglass merely for his own amusement and information? Then, again, the defendant had made no objection to the report, which he admitted he received on the 10th April; but he said he had not then had the account, or he would have returned it in a few hours with his objections. However, it appears by his own admission he had the account a month in his possession before making any objection to it; and it did not appear that he would, then, or at any time, have made his objection, but for the fact that he had been applied to for payment. The defendant said that he had fully satisfied the plaintiff's demand by paying twenty guineas into Court. The jury would say, in looking to the whole of the evidence, including the statements of plaintiff and defendant, whether that sum was in their judgment a reasonable and fair remuneration for the scientific services of the plaintiff.

The Jury retired to deliberate for about a quarter of an hour, and then returned a *Verdict for the Plaintiff* for the full amount claimed.

The Judge was applied to respecting special fees to the scientific witnesses, who had attended at much trouble and loss of valuable time to give evidence. He said

the fees were fixed by law and he could make no alteration in them; or under the circumstances of this case, he would certainly have granted the fullest allowance. The defendant would pay the legal costs.

Correspondence.

REMARKS ON ANGINA PECTORIS.

SIR,—Should the following outline of the history of angina pectoris be considered deserving of a place in your valuable periodical, its insertion will oblige,

Yours respectfully,

JAMES KIRK, M.C.

405, Gallowgate, Glasgow.

Definition.—Neuralgia of the branches of the par vagum, going to the heart and lungs; embarrassing the functions of these organs, and spreading by nervous connection to other parts; sometimes accompanied by organic lesion of the heart or great vessels, sometimes not.

Causes.—Predisposing; the middle age, the male sex, an indolent, luxurious, studious, or sedentary life; gout, rheumatism, or neuralgia; or worse than these, the long-continued anxiety of mind and fatigue of body, to which persons of high mind and narrow circumstances are, in the present state of society, so constantly exposed.

Causes.—Exciting, running, walking, especially up hill, or up stairs, great bodily exertion or mental excitement, and rapid changes of temperature: thus we most frequently see a severe attack after great exertion, a fit of passion, or on the evening of a cold wet day. As the disease increases in severity it will be found that slighter causes are sufficient to produce an attack; and that any one of them will occasion a seizure much more certainly after a meal. Finally, when the disease has become chronic, it may even attack the patient in his sleep.

Symptoms.—In the acute form of the disease the patient is suddenly seized with a sharp, darting, lancinating, or stabbing pain under the left breast, frequently spreading to the throat, arm, back, and leg of the same side; this pain frequently amounts to the most excruciating agony, and has been compared by Laennec to the piercing with nails or the laceration by the claws of animals; and is accompanied by a sense of suffocation, great difficulty of breathing, tendency to syncope, and flatulent distension of the stomach followed by eructations; together with the fear and the feeling of immediate death.

The pulse varies in different individuals; sometimes it is regular, sometimes irregular, sometimes weak, sometimes strong; but generally feeble and slow. After lasting for a longer or shorter time proportioned to the severity and duration of the disease, the attack generally passes off spontaneously, or yields to the remedies employed.

A feeling of weakness and numbness sometimes remains for a little in the parts previously affected with pain; but with this exception the patient may enjoy tolerable health, and show no sign of disease until again exposed to some of the exciting causes.

In the chronic form of the disease the attacks are often preceded by yawning and weariness; they are now more readily excited; the interval between them also is shortened, and the relief obtained afterwards more imperfect; the pain commonly lasting longer, but being less violent. In addition likewise to the anginous paroxysm the patient generally suffers from some other allied disorder of the nervous, digestive, or circulatory system, which may have been either a cause or a consequence of his malady; tic, dyspepsia, constipation, diarrhoea, (leucorrhoea if the patient is a female), œdema, dropsy, or organic disease of the heart, may also be present to increase his suffering and diminish his hopes of recovery.

Diagnosis.—The only disease which bears any resemblance to angina is asthma; but the sharp pain in the breast and arm, and the sense of suffocation characteristic of angina, can hardly be mistaken for the dyspnoea, cough, and expectoration of asthma.

Prognosis.—Angina is a disease not necessarily fatal when occurring in young subjects with no organic disease of the heart; but when it occurs in elderly people with organic disease of the heart or great vessels it is always mortal. In such cases, indeed, the organic lesion may be quite sufficient to account for the death of the patient, independent of the angina.

Pathology.—In the great majority of cases in which an inspection has been obtained after death, the heart or large vessels have been found diseased; but their pathological condition has been by no means constant or uniform. In some cases organic disease of the heart, the aorta, or the coronary arteries, have been found; in others ossification of the coronary arteries, ossification of the valves, ossification or dilatation of the aorta, or preternatural softness of the heart, have been discovered, after death. Indeed, in the words of Dr. Unwins, "there is scarcely any malformation of the heart or its bloodvessels that has not been occasionally found after death,

from what would be considered angina pectoris; while, on the other hand, individuals have fallen victims to the affection, fully marked, and the most accurate post-mortem examination has not been able to detect the slightest indication of structural derangement." In other cases again, according to Dr. Copland, the only morbid appearances have been found in distant organs; the heart and large vessels remaining sound. These appearances were "adhesions of the pleura; effusion into the pleura; thickening of the bronchial mucous membrane; dilatation of the bronchi; œdema of the lungs; abscess in the mediastinum; ossification of the cartilages of the ribs; enlargement of the liver, and scirrhus of the pylorus."

But, on consideration, it will be obvious that we must look to some other cause than the organic lesions just mentioned for an explanation of the terrible agony endured in this disease; seeing that singly and by themselves they do not account for it.

For, in the first place, these lesions are of very frequent occurrence, while angina is a rare disease; 2dly, these lesions are for the most part permanent conditions of the parts in which they occur, while this disease is intermittent; 3dly, these lesions may be present and the disease absent, or conversely, the disease may be present and the lesions all wanting; while in none of them does the patient endure the same amount of suffering as in angina; 4thly, we have seen a case in which tic preceded angina, or, in other words, the patient had neuralgia of the branches of the fifth pair going to the face, before those of the eighth (going to the heart) were affected by the same disease. These, and other reasons that might be mentioned, serve to show that something more than an organic lesion is required to constitute the disease under consideration, and to confirm the opinion of Jurine, Desportes, Laennec, Chapman, and Copland, that it is a species of neuralgia of the pulmonary and cardiac nerves, affecting the functions of the heart and respiratory organs, and extending by nervous connection to other parts; the organic lesions found in fatal cases being either coincidences or effects of the disease."

Treatment in the attack.—If the pulse is full and strong, and the patient stout and plethoric, bleeding from the arm should be practised; but if the patient is weak and debilitated, and the pulse feeble and slow, it should be altogether avoided. And instead of bleeding, a flannel wrung out of hot water and sprinkled with turpentine should be placed over the region of the heart; the feet put in hot water containing mustard, and sixty drops of laudanum given immediately in a glass of any strong

spirit: if relief is not speedily obtained this dose may be repeated with perfect safety; and sometimes acts like a charm in relieving the pain. This should be followed by the exhibition of some antispasmodic and carminative, such as ether, aromatic spirit of ammonia, or ammoniated tincture of valerian in cinnamon or mint water, in order to assist the stomach to expel the gas which distends it; these should also be given after bleeding in those cases in which it is practised, for when greatly distended, as it commonly is in this disease, the stomach pushes up the left side of the diaphragm: this diminishes the capacity of the chest, and so impedes the movements of the heart. It is not to be supposed, however, that the distension of the stomach is the cause of the pain in the breast; for the pain at the heart is felt before the distension of the stomach is complained of.

Treatment in the interval.—In the first place it will be absolutely necessary to discover by the most careful examination what are the predisposing and exciting causes of the disease, in order to avoid them if possible, as well as to determine the actual condition of the heart and lungs by means of the stethoscope.

For example, attention should be paid to the patient's habits and manner of living; the state of the stomach, bowels, liver, (and uterus if a female); the condition of plethora or anæmia, and the predisposition to gout, rheumatism, or neuralgia: in short, every appreciable disorder of the system is to be met by the appropriate remedies, and corrected as far as possible. If the stethoscope should enable us to discover any abnormal condition of the heart, the treatment must have a special reference to that condition: of course, where there is serious organic disease of the heart, a cure is not to be looked for; here the utmost we can do is to palliate the urgent symptoms. The remedies which have been found most useful are leeching, or cupping and counter-irritation over the region of the heart by means of croton-oil liniment, tartar emetic ointment, repeated blisters or issues, with low diet in the cases of stout plethoric individuals. With weakly debilitated subjects an opposite plan of treatment ought to be followed; tonics, such as bark and steel, should be exhibited with nourishment and cordials. Various other medicines have been recommended in angina; the preparations of iron, sulphate of zinc, nitrate of silver, arsenical solution, sulphate of quinine, mercurials, and colchicum, may all be prescribed with advantage according to the various indications afforded by the history of each individual case.

In addition to the above, we may men-

tion that Laennec recommended magnetism, and Kneeland electricity; and that Heberden gave an opiate at bed-time when the attacks occurred during the night. Moreover, cases of every variety of complication will be much benefited by pure air and gentle exercise, together with an entire change of all the habits and circumstances prejudicial to the patient's well-being, in which the disease had its origin.

COMMENTS UPON THE MEDICAL EVIDENCE IN AN ALLEGED CASE OF MURDER BY HANGING.

SIR,—Our profession has too frequently, and not seldom with reason, had to bear the imputation of retarding rather than of promoting the ends of justice, when its members have been called into the witness-box. By hesitations, contradictions, verbosity, or pedantry, the medical witness has occasionally excited the anger of a judge, and the contempt of the bar, while he has only mystified the jury. On the other hand, abundant are the instances in which the clear and unhesitating deposition of facts, the intelligible and unanswerable statement of opinions, have guided and instructed judge, counsel, and jury. Frequently as we maintain that such evidence is given by the medical witness, it may not be uninteresting to your readers to refer to an example, that has recently occurred, of the value of medical evidence when properly and confidently given.

At the last Exeter Assizes, a trial took place before Mr. Justice Coleridge, in which William Edwards Rowe was indicted for the wilful murder of John Bunker, on the 7th of March; in which case sufficient circumstantial evidence was adduced to have justified a verdict of "guilty," had not medical evidence shown that death was the result of suicide.

We proceed to relate the circumstances. The body of a youth was found hanging from the fork of a tree, with the knees bent, and the hands nearly touching the ground. The witness who discovered the body thus described its position:—

"I saw something apparently lying down in the orchard. I looked more, and I saw the appearance of somebody's legs. I called out twice, but received no answer. I went into the orchard, and when I came to a tree, I found the poor boy hanging to the tree. I lifted him up, untied the rope from the tree, and put him down on the ground, and slackened the rope that was round his neck. I did not knock him against the tree at all in taking him down. [The rope was produced.] I went and gave the alarm at the farm. The crown of the boy's head was a foot from the fork of

the tree where the rope was. His legs touched the ground. One leg was crossed over the other, and the knee of one leg was on the ground. His hands were hanging down, and blood was flowing from his nose down into his mouth; but the blood was then dry and stiff. Old Mr. Rowe went down with me to the orchard where the boy was lying. Two men, Nicholls and Karn, had gone down first. We put the body into the cart, and took it to the house. There was some straw put into the bottom of the cart. His cap was lying half a yard from the tree. His trousers and hands were dirty.

“Cross-examined.—I was very much flurried. I got him down from the tree as fast as I could. The right side of his head touched the tree when I first saw him. I might have said that the boy had hung himself, because that was my impression when I found him there. He was dead and stiff when I found him. When we got him to the house we carried him up stairs and put him on the bed. The rope was tighter round his neck than it was round the tree. It was a running knot. The tree was four land yards from the road. I showed many persons how I found him, and how the rope was tied.”

The deceased had been seen alive a few hours before his body had been discovered. The general evidence went to show that the last person who was seen to have been near to, or to have spoken with deceased, was an individual who had reason to consider that his character had been aspersed by deceased; and from the facts deposed to, a strong presumption existed that the aforesaid individual was the murderer.

In this case the medical evidence proved the inference to be incorrect. We here submit this evidence, which there is no doubt influenced the minds of the jury to the formation of a just opinion, whereby the life of an innocent man was saved:—

“William P. Mole.—I am a surgeon. I was sent for on the 7th of March. I arrived about ten at night. I saw the body. There were froth and blood about the mouth. There was a mark of the cord all round the upper part of the neck, with a mark under the right jaw. The cheeks were discoloured with blood, and so were the eyelids. There was a mark as of a blow on the left temple. There was a small spot of dried blood under the nostril. On Saturday, the 8th, I had the boy stripped. There was no mark of violence on the head. I made another examination on the Sunday. There were several extravasations of blood under the scalp. It presented a healthy appearance. The cause of his death was suffocation from strangulation.

“Cross-examined.—His nails were unbroken; they were rather short. There was nothing indicating resistance on his part. His shirt-collar was buttoned. I consider it possible that the mark on the temple might have been caused by the boy struggling against the tree. There was no fracture of any bone. The mark on the temple was only external, and I considered it had not been a severe blow. Death was caused by the cord round the neck. It is possible that a party found as the boy was might have committed suicide.

“Re-examined.—I do not consider it probable that the boy committed suicide.”

“John Whipple.—I am a surgeon, and have been in practice 25 years. Served my time in the Naval Hospital. I viewed and examined this body after it had been exhumed. The nails were short and smooth. No marks of violence except over the left eye, where there was a slight abrasion of the skin, three-quarters of an inch long and a quarter of an inch wide. There was a black patch on the under surface of the scalp corresponding with the external mark. There were several spots of extravasated blood which indicated external violence. The only way I could account for their being caused was by a blow. I tried to remove them by washing, but I could not succeed. It strikes me that it would have been more likely to have been produced by the fist, and I should say more than one blow. It must have been more by a dragging than a straight blow. The appearance on the scalp might have been produced by the strangulation. The blow might have stunned the boy for a time. The neck indicated that a ligature had been passed round it. Strangulation was the cause of the death. From the position in which he was found, as described by the witnesses, it would be possible for him to have committed suicide. I have seen such instances, but I do not think it probable. I have never known a case of suicide when the hands rested on the ground. I have heard of such a case. I think insensibility comes on so imperceptibly that they lose the power of control over themselves.

“Cross-examined.—The previous acts form no criterion with regard to suicide. A servant of my own made a very good dinner, and within a very short period destroyed himself. He was particularly cheerful that day. The pressure on the jugular would produce stupefaction. There was no appearance inconsistent with a suicidal act.

“Re-examined.—I think the bruise on the temple was produced by some other cause than knocking against the tree. I cannot conceive a man in his reason hang-

ing himself. I should not think this person could have screamed.

"By the Judge.—I could collect nothing from the marks of the ligature as to whether or not it was suicide."

The *facts* deposed to by the witnesses were more than enough to outweigh their mere *opinions*. There was quite sufficient to prove suicide, and to have justified the instructions of

"Mr. Justice Colridge, who, in summing up, said the question in this case would be purely a question of fact, depending upon the conclusion the jury should come to upon the evidence they had heard, and it was, whether this unfortunate boy, John Bunker, had come to his death by his own hand or not? If they were of opinion that he had destroyed himself, or that it was left in reasonable doubt, the rest of the inquiry would be irrelevant; but if they were satisfied that John Bunker came to his end by the violent act of some one, then the remaining question would be whether, upon the evidence, it was clearly made out that the prisoner was properly charged with having committed that act.

"The jury having retired about half an hour, gave a verdict of Not Guilty."

Of the soundness of this verdict there can be no difference of opinion. The accused narrowly escaped from the capital punishment, and that mainly, if not entirely, through the nature of the medical evidence.

On this ground alone I have thought it right to draw the attention of your readers to this trial, in order that they may appreciate the value of their evidence, and the power they hold on such occasions of deciding the question of life or death.

I remain,

Your obedient servant,

MEDICUS.

August 16, 1851.

Hospital and Infirmary Reports.

Observations on Clinical Surgery—Varicocele. By M. Jules Roux, Surgeon-in-Chief of the Marine at Toulon.

VARICOCELE was long considered an incurable disease, or one which could not be interfered with except under rare circumstances, and never without incurring risk to the life of the individual. Science has introduced great improvement on this point; the works of Breschet, Reynard, Landuzy, Velpeau, Vidal, Ricord, the author, and others, have rendered the radical cure of varicocele an incontestable

fact; so well established, indeed, that M. Roux states that he has been induced to practise constriction of all the elements of the cord, except the vas deferens, in a case of obstinate neuralgia of the testicle. The manner in which M. Roux operates, will, he supposes, not be immediately imitated by every surgeon, but he is not without hope that the perusal of the following case may receive the approval of some.

M. Douadey, coiffeur, thirty-two years of age, presented all the characters of a nervous temperament. In 1840, after venereal gratification, he experienced the most acute pain in his limbs, the spermatic cord, and right testicle. These pains lasted five months. Two years later they returned, and tormented the patient for about six months. In 1846 and 1848 he also suffered from a return of the complaint, accompanied with other neuralgic affections. In the month of January 1849, the patient bruised his testicle; the pains then reappeared with more intensity than ever. This neuralgia, which resisted the best directed treatment, now caused great depression of spirits.

Towards the end of May, the patient consulted M. Roux, who found him in the following condition. His features were much altered; he was emaciated. There was an exaltation of the intellectual powers, with a tendency to suicide. The right testicle and cord had their ordinary appearance; they were the seat of excruciating pain, which left the patient no rest; the slightest pressure induced the most intense suffering. The epididymis and canal presented nothing unusual; the veins were slightly dilated; a slight nodosity was felt at some points; there was in fact incipient varicocele; the veins of the left cord were in a similar condition, but free from pain. The right lower extremity was the seat of pain, and could not be freely extended.

Emollients, antiphlogistics, purgatives, narcotics, local irritants, morphine vesicants,—all failed to bring any alleviation. The patient at length pressed M. Roux to perform the operation for varicocele, of which he had heard mention. His request was, under the peculiarly distressing circumstances of the case, acceded to. On the 12th of June chloroform was administered, and the operation *par enroulement* performed. The results were perfectly satisfactory; the wires were three times tightened. The pain which was caused at these times was trifling, notwithstanding the pusillanimity of the patient, who was ready to exaggerate them. On the 6th of July the wires came away; and on the 26th cicatrization was complete.

The success of the operation is due, in the opinion of M. Roux, to the division of

the nerves of the spermatic cord. — The inclusion of all the elements of the cord, except the vas deferens, ensured that division with more certainty than the application of a ligature to, or incision of, the nerve itself. The subcutaneous dissection that is required, amounts only to the isolation of the vas deferens from the other elements of the cord, and is readily effected by the fingers. The separation of the nerve alone, in neuralgia of the testicle is no more practicable than is that of the veins in varicocele; hence the necessity which exists for the entire division of all the structures in these two different pathological states; a proceeding which is also free from the accidents and liability to relapse which attend division or ligature of either veins or nerve.

M. Roux observed that varicocele of the right side is extremely uncommon, and stated that on one occasion, when assisting M. Vidal in operating upon the right testicle, he happened to place his hand upon the patient's chest, and felt the heart beating on the right side; in this case a transposition of viscera existed, so that in truth this varicocele did not form an exception to the general rule.

Medical Intelligence.

UNIVERSITY OF LONDON. FIRST EXAMINATION FOR THE DEGREE OF BACHELOR OF MEDICINE.

EXAMINATION FOR HONOURS.

Anatomy and Physiology.

Hillier, Thos., Exhibition and Gold Medal, University College.
Tunzelmann, J. W. de, Gold Medal, University College.
Roberts, William, University College.
Ekin, James, University College.
Robbs, William Edward, King's College.
Ramskill, Josiah, Guy's Hospital.
Carter, Henry Vandyke, St. George's Hosp.
Winter, John Newnham, Guy's Hospital.

Chemistry.

Roberts, William, Exhibition and Gold Medal, University College.
Ramskill, Josiah, Gold Medal, Guy's Hosp.
Hillier, Thomas, University College.
Tunzelmann, J. W. de, University College.
Carter, Henry Vandyke, St. George's Hosp.

Materia Medica and Pharmaceutical Chemistry.

Ramskill, Josiah, Exhibition and Gold Medal, Guy's Hospital.

Tunzelmann, J. W. de, Gold Medal, University College.
Hillier, Thomas, University College.
Mushet, William Boyd, University College.
Winter, John Newnham, Guy's Hospital.
Ekin, James, University College.
Briggs, Henry, University College.
Roberts, William, University College.

Structural and Physiological Botany.

Tunzelmann, J. W. de, Gold Medal, University College.
Hillier, Thomas, University College.
Ramskill, Josiah, Guy's Hospital.
Briggs, Henry, University College.
Winter, John Newnham, Guy's Hospital.

M.B. FIRST EXAMINATION.—1851.

EXAMINATION FOR HONOURS.

Thursday, August 14.—Morning, 10 to 1.

Anatomy and Physiology.

Examiners, F. KIERNAN, Esq. and Prof. SHARPEY.

Commencing the dissection at the integuments, and continuing it to the anterior of the vertebral column, describe the parts successively met with in a portion of the neck bounded below by the upper border of the sternum and first pair of ribs, above by a line drawn across the lower part of the cricoid cartilage, and on the sides by lines corresponding to the external borders of the scaleni antici muscles. The form, position, and connexion of the parts to be described, but not their internal structure.

Afternoon, 3 to 6.

Examiners, F. KIERNAN, Esq. and Prof. SHARPEY.

1. Describe the parts situated in the plantar region of the foot (except the bones) in the order in which they present themselves in dissection.
2. Explain the following points respecting the non-striated muscular tissue, viz.: — the parts of the body in which it occurs, its aspect and mode of arrangement as apparent to the naked eye, its microscopic characters, and the differences which it presents in different situations.

Friday, August 15.—Morning, 10 to 1.

Chemistry.

Examiner, Professor BRANDE.

1. How was *Chloroform* first obtained? What is the best process for its production and purification? Give the formulæ illustrative of its formation, and describe its properties, and the tests of its purity.
2. Give an outline of the proximate analysis of the *muscular flesh* of animals, and state the composition and properties of its

Dr. Baseombe, Wyke House, Brentford; Dr. Cox, Fishponds, Bristol.

Dr. JOHN CONOLLY, the senior member present of the Metropolitan Hospitals for the Insane, was requested to take the chair.

Dr. STEWART, Secretary of the Association for Ireland, was requested to act as Secretary to the meeting.

The usual report made by the Secretaries was read and adopted.

The CHAIRMAN briefly and ably addressed the meeting concerning the objects of the Association, and pointed out some of the services it might usefully perform, such as the revision of the Lunacy Acts, &c.

Mr. LEY, Mr. ALDERSON, Dr. W. CONOLLY, and other gentlemen, respectively directed attention to the necessity there existed for an improved state of the Acts of Parliament relating to Lunacy.

It was then resolved unanimously,—“That a Committee be formed to examine the Lunacy Acts and to draw up a report thereon, indicating ambiguities and defects, and suggesting alterations and amendments; such report to be printed and circulated among the members of the Association for their adoption, and subsequently transmitted to the Secretary of State and to the Commissioners in Lunacy; and that the above Committee consist of the following members:—Dr. J. Conolly, Dr. Forbes Winslow, Dr. Bueknill, Dr. Hitch, Dr. Nesbitt, Dr. Boyd, Dr. Corsellis, and Mr. Diamond.”

Dr. Forbes Winslow was requested to act as Secretary to the Committee, and to arrange in proper form the written statements that might be supplied on the subject for which it was appointed, which he consented to do, it being understood that although the above Committee undertook to apply themselves especially to the object for which it was formed, yet the assistance and suggestions of all the members of the Association would be willingly received.

The CHAIRMAN read an extract from a letter addressed to him by Dr. Williams, of the Gloucester Hospital for the Insane, urging the propriety of a petition being addressed by the Association to Parliament, for the establishment of a *Central criminal asylum*, and observing that such an asylum had been established by Act of Parliament in Ireland, and found to work admirably. The Chairman, with much feeling and ability, alluded to the unfavourable position in which criminals were now placed if the plea of insanity was admitted,—their doom being actually worse than transportation, and almost worse than death.

Dr. STEWART stated that he had visited the central asylum near Dublin, which he considered to be admirably circumstanced

in all essential respects for such an institution; its situation, too, being most cheerful and picturesque, and its whole management most ably and humanely conducted by Dr. Corbett, the resident physician, appointed by government. After observing upon the great relief now afforded to the hospitals for the insane in Ireland, by the criminal insane being placed in an entirely distinct establishment, he presented to the Association, in the name of the Government Inspectors of Asylums in Ireland—Drs. White and Nugent—their “Fifth General Report on the District Criminal and Private Lunatic Asylums in Ireland,” containing full particulars and statistics of the central asylum in common with all the other asylums in that country.

Dr. FORBES WINSLOW supported the necessity for a central criminal asylum in England, where the criminal lunatics might be properly classified, concluding his observations on this subject by alluding, with much energy and feeling, to the indignities and browbeatings which, of late especially, medical witnesses of the greatest eminence and respectability were subjected to, both from the bench and the bar, when called upon to give evidence in support of the plea of insanity in criminal cases.

Dr. KIRKMAN advocated the importance of a criminal asylum being established, and strongly advised that the Association should lose no time in following the example of Ireland in a matter of so much importance, and so much affecting the comfort and well-being of the ordinary inmates of hospitals for the insane.

Drs. NESBITT and BUCKNILL, and Mr. OGILVIE, having expressed similar views, and shewn the inconveniences and injustice of present arrangements for criminal lunatics, it was unanimously resolved—1. That it is desirable that there should be a central asylum for criminal lunatics in England, distinct from any asylum in which the insane, not criminal, are received. 2. That Dr. Williams, of the Gloucester Hospital for the insane, be requested to give his best consideration to this subject, and to prepare a petition, to be submitted to the members of this Association, and to be forwarded to the Secretary of State for the Home Department. Resolved unanimously, that the especial thanks of the Association be given to Drs. White and Nugent, the Government Inspectors of Hospitals for the Insane in Ireland, for their courtesy in now presenting the Association with their lately published valuable annual report, and for the great improvement they have been so instrumental in effecting in the District Hospitals for the Insane in Ireland, by obtaining the decision of Government in favour of none but medical men, duly qualified

and experienced, being, for the future, appointed the resident superintendents of those important public institutions. Also, resolved unanimously, that Drs. White and Nugent be elected members of this association, and that a copy of the foregoing resolutions be duly transmitted to them by the Secretaries.

The following resolutions were also agreed to:—That the annual meeting of the Association be, in future, held in London, on the second Saturday of July, in each year, at the Freemasons' Tavern, at one o'clock, P.M. The quarterly meetings, of such members of the Association as can conveniently attend them, to be held on the first Saturday in the months of March, June, September, and December, in each year, at three o'clock, p.m. (Dr. Forbes Winslow offered the use of his rooms, in Albemarle Street, for those meetings.) That Mr. Diamond, of the Surrey Hospital for the Insane, be requested to act as Metropolitan Secretary. That Dr. Williams, of the Gloucester Hospital for the Insane, be requested to continue his valuable services as Secretary. That the annual subscription, for the purpose of defraying unavoidable expenses, be five shillings.

Mr. ALDERSON, of the Nottingham Hospital for the Insane, exhibited and explained an improved lock-button, for the purpose of securing the dress of the insane, for which the thanks of the meeting were voted to him.

It was proposed and agreed to, that the Association visit the New Additional Hospital for the Insane, for the County of Middlesex, at Colney Hatch, on next day (Friday), at one o'clock, P.M.; also, the Asylum for Idiots, at Highgate, on Saturday forenoon, the 19th instant; and, on the invitation of Mr. Diamond, the Surrey Hospital for the Insane: in the afternoon of the same day, Bethlem Hospital.

All the gentlemen present were voted members of the Association, as also, Dr. Stilwell, of Hallingdon; Dr. Tuke, Chiswick; Mr. Denne, Hanwell; Mr. Daniel, Southall Park; Dr. White, Resident Physician, Carlow District Hospital for the Insane; Dr. Corbett, ditto, Central Asylum, Dundrum; Dr. Power, Visiting Physician, Cork District Hospital for the Insane; Dr. Hood, resident Physician, Colney Hatch; Dr. Davey, ditto; Mr. Snape, Resident Surgeon, Surrey Hospital for the Insane; Mr. Green, Resident Medical Superintendent, Borough Hospital for the Insane, Birmingham; Dr. Pritchard, Abington Abbey, Northampton; Dr. Maxwell, Resident Medical Superintendent, Asylum for Idiots; Dr. Wood, Resident Physician, Bethlem Hospital.

It was resolved unanimously—That the

cordial thanks of the meeting be given to Dr. Stewart, the Secretary of the Association for Ireland, for his attendance and valuable services at the meeting.

Dr. Conolly having left the Chair, and Dr. Lloyd Williams having taken it, it was resolved unanimously, that the marked thanks of this meeting be given to Dr. John Conolly for the very able and courteous manner in which he has fulfilled the duties as chairman of this meeting.

Adjourned meeting at Colney Hatch New Hospital for the Insane for the County of Middlesex, on Friday, July 18th.

Present—Dr. Hood, Dr. Davey, Resident Physicians of the Hospital; Mr. Mallam, Dr. Kirkman, Dr. Wintle, Dr. Ramsay, Dr. Boyd, Mr. Eccleston, Mr. Alderson, Mr. Ogilvie, Dr. Richard Lloyd Williams, Mr. Ley, Mr. Cornwall, Dr. Bush, Dr. Stewart. Visitors—Mr. Nunnely, F.R.C.S., Leeds; Mr. Moseley, Architect of the New Hospital for the Insane for the County of Lancaster, at Rainhill, Preseot, and the Surrey ditto, and the New Wings, at Hanwell.

The Association being very politely conducted through the entire establishment, by Doctors Hood and Davey, a vote of thanks was passed to both gentlemen for their great kindness and attention, and the trouble they had so willingly taken in pointing out every matter of interest or any new feature in the arrangements of an institution of such vast magnitude, to the members separately and collectively; as, also, for the hospitable manner in which they had been entertained by Dr. Hood.*

A conversation having arisen amongst the members of the Association, after the above meeting, respecting the address which had been presented by them, some time since, to Mr. Gaskell, late Medical Superintendent of the County Asylum at Lancaster, congratulating him on his appointment as one of the Commissioners in Lunacy, and to which no answer had been supposed to have been received, to the present time, but which it now appeared had been duly given, it was resolved—That Dr. Williams, Gloucester, be respectfully requested to have the address, above referred to, inserted, with Mr. Gaskell's reply, in the proceedings of the Association, and printed at the same time with the minutes of this year's meetings, for circulation amongst the members.

* This hospital is calculated to accommodate from 1,000 to 1,200 inmates. It has been erected at a cost of £250,000 and upwards, and stands on 118 acres of ground. Its frontage is about half a mile in extent, and thirty-six feet longer than the Crystal Palace.

Meeting at the Asylum for Idiots, Park-house, Highgate, on Saturday, July 19.

Present—Dr. Maxwell, Resident Physician of the Asylum; Dr. Ramsay, Mr. Eccleston, Dr. Bucknill, Dr. Wood, Resident Physician, Bethlem Hospital; Dr. Stewart.

Dr. MAXWELL having received the Association most kindly, and brought them through the respective divisions, and over the grounds of the institution, and taken much trouble in recounting the history of several cases of a more than ordinarily interesting nature, then under treatment, the Association took their leave, greatly pleased with their visit, first recording a vote of thanks on the books of the institution to Dr. Maxwell, for his marked kindness and attention, whilst conducting them over the establishment.

The Association were received in the evening, by Dr. Forbes Winslow, at a *conversazione*, at his residence, Sussex House, Hammersmith, when a most agreeable *réunion* took place, a very large number of members and others, with several foreign practitioners of eminence, being present, who separated at a late hour, highly delighted with the urbanity of their distinguished host, and the varied means he had so liberally provided for the evening's enjoyment and entertainment.

Meeting at the Surrey County Hospital for the Insane, Wandsworth, on Saturday, July 19.

Present—Mr. Diamond, Mr. Snape, Resident Medical Officers; Dr. Lloyd Williams, Mr. Eccleston, Mr. Ley, Mr. Alderson, Dr. Ramsay, Dr. Wood, Dr. Stewart.

Mr. Diamond and Mr. Snape kindly and freely conducted the members in attendance through this large establishment, when a vote of thanks was passed to them for their attention, &c., after which the Association withdrew, being much gratified with their visit to so well-circumstanced and beautifully-situated an institution, giving accommodation to nearly nine hundred patients of both sexes.

Meeting at Bethlem Hospital on Saturday, July 19.

Present—Dr. Wood, Resident Physician of the Hospital; Dr. Richard Lloyd Williams, Dr. Ley, Mr. Eccleston, Dr. Bucknill, Dr. Ramsay, Dr. Kirkman, Dr. Stewart.

The members visited the several departments of the establishment, during which they were much pleased with the examination of a very neat and light pattern window-frame, fitted up in one of the corri-

dors, excellently adapted for the freest admission of air, and quite secure as regarded the safety of patients; and, also, a bed in use in the hospital for wet patients; both being the designs of Dr. Wood, and much approved of by the members, each appearing well calculated for its respective purposes.

A vote of thanks was passed to Dr. Wood for his great courteousness and attention to the Association, on occasion of their present visit; and for the hospitalities so liberally provided for them at his table, the members being honoured with an invitation to dinner, which having accepted, they finally separated highly gratified with their entire reception, and the profit and pleasure they had been afforded by becoming personally acquainted with Dr. Wood.

THE CHOLERA IN THE WEST INDIES.

IN intelligence from Jamaica of the date of the 29th July, it is stated, that the cholera, with its devastating influence and pestilential breath, still remained in various parts of the island, scattering terror and desolation in localities which had hitherto remained seathless. Medical skill seemed to be entirely baffled, and nought but the interposing hand of Providence could put a stop to the ravages of the fell destroyer. The city of Kingston was perfectly healthy, and the authorities were acting on the suggestions of the Board (central) of Health, published in the form of a *brochure*, to suppress as much as possible all sources and springs of disease.

The weather in all the parishes was very dry, in the city of Kingston particularly no rain had fallen for some time. Altogether, the health of the island (the cholera-infected districts excluded) was very satisfactory.

PROPHYLACTIC TREATMENT FOR THE PREVENTION OF STRICTURE OF THE OESOPHAGUS.

IN the Boston Medical Journal, a case of stricture of the oesophagus is referred to, which proved fatal *two years and three months* after soap-lees had been accidentally swallowed. The symptoms were almost precisely analogous to those which were presented in the many similar cases that are on record: namely, apparently complete recovery from the immediate effects of the accident; symptoms of difficulty in swallowing, occurring many months—in this case *ten—afterwards*; the patient being unable to get any solid food into the stomach, it being returned by the mouth, after having been retained in the oesophagus for a space; rapid improvement at first, under the use of bougies, but even-

tually complete closure of the passage; and death, with the most frightful sufferings from hunger and thirst.

The deduction to be drawn from all the recorded cases of œsophageal stricture produced by local irritants is, that as soon as the immediate inflammatory symptoms have been subdued, the bougie should be employed daily, and its use continued for many months, *even in the absence of any indications for its necessity*. Indeed, its introduction, at short intervals, should not be omitted during the remainder of the individual's life.

* * We believe this case occurred to Dr. Basham.

SUICIDE BY CHLOROFORM.

THE chief physician at the Royal Hospital at Vienna, Dr. Reyer, was recently conversing with his colleagues as to the least painful form of death, apparently in good health and spirits at the time; yet the same evening he was found in his room a corpse, having put an end to his existence by fastening a bladder filled with chloroform round his mouth and nostrils by means of a band of diachylon plaster.

INHALATION OF ETHER IN SORE-THROAT.

AT the last meeting of the Suffolk District Medical Society, a case of abscess of the throat was mentioned, wherein the patient could not swallow liquids for some days, in consequence of the severe pain which was produced. It was therefore determined to try the effects of inhaling ether. When the patient began to feel its intoxicating properties he was at once enabled to swallow, without pain or difficulty, which was done most greedily. — *Boston Medical Journal*.

SUPPRESSION OF THUGGISM IN THE STREETS OF LONDON.

IT has been known that for some months past, the perpetration of robbery in the streets of the metropolis, has been in several instances preceded by a partial strangulation of the victim. The lives of several persons have been thus placed in the greatest jeopardy, and the miscreants have generally escaped by reason of the person assaulted being rendered at once insensible, and incapable of calling for assistance. We are glad to perceive, by a case tried on the 21st inst., at the Central Criminal Court, that two of these London Thugs have been convicted of this atrocious crime, and sentenced to transportation for life. The English law does not recognise the *lex talionis*,—or partial strangulation, with an occasional whipping, would have been a proper addition to their punishment.

GRADUATES OF UNIVERSITY AND KING'S COLLEGE, ABERDEEN, 1851.

THE degree of M.D. has been conferred during the present year on the following gentlemen:—George Everest, Kent; Colvin Smith, Aberdeen; Charles Warden, Warwick; William S. J. H. Munro, Caithness; John Jay Clarke, Bombay; Edward Hart Vinen, Dorsetshire; John Butter Ashford, Devonshire; William J. Grugger, Chichester; John Shea, Dublin; John Tapsen, Clapham; Edmund Sheppard Symes, London; George H. Edwards, Middlesex; Alexander Wales Walker, Aberdeen; Theophilus C. Lewis, London; John Berry, Cork; William G. Goldin, Hants; John Horton Broxholm, Sunbury; Edward Boulger, Berkshire; William H. Benson, Cumberland; George Forster Burder, Gloucestershire; John Evans, Dublin; Frederiek Collins, Essex; Thomas Bishop, Hereford.

HONOUR CONFERRED ON PROFESSOR LIEBIG.

PROFESSOR LIEBIG, of Giessen, has been decorated with the Cross of Commander of the order of Francis Joseph, on account of the services he has rendered to the science of chemistry.

BEQUEST TO UNIVERSITY COLLEGE HOSPITAL.

THE Committee have received notice of a legacy of £300, free of duty, bequeathed by the late Mrs. Mary Ann Bentham, of Upper Gower Street, and directed to be paid within six months after her funeral.

THE QUARANTINE LAWS IN THE LEVANT.— THE SPREAD OF CHOLERA IN AFRICA.

THE Gibraltar Board of Health has decreed that all vessels or boats coming from, or having touched at, or having had communication with any vessel from any port in Algeria, the Spanish settlements on the Rif coast, and the Chafarenas Islands, shall be ordered to quit the port.

On the 12th inst., the Board of Health at Cadiz, considering the rapid progress of cholera in Africa, ordered that all vessels arriving at the ports of the said province from those of the African coast, that is to say, from Algeria to Magadore (Ceuta lone excepted for the present); should be sent to the Lazarettoes of Vigo or Mahon, as well as all vessels which, coming from the same African ports, may have put into a Spanish one without performing quarantine at the said Lazarettoes.

Selections from Journals.

DEATH BY HANGING. BY R. M. PORTER,
M.D., OF NASHVILLE, TENN.

A POST-MORTEM examination was made twenty-four hours after death, upon two negroes, Henry and Moses, executed at Nashville on the 21st February, 1851.

The brain was congested in both cases. The vessels supplied with blood from the carotids were tinged with blood of a dark venous hue; those supplied by the vertebral arteries preserved their natural aspect, the blood retaining its scarlet arterial colour. The two kinds of blood were very distinctly seen at the termination of the basilar artery in the circle of Willis. The sinuses of the dura mater were full to distension.

In both subjects there was considerable effusion of serum into the arachnoid cavities, sub-arachnoid cellular tissue, and ventricles—to such an amount as probably to have caused serous apoplexy. There was no extravasation of blood in any part, nor any appreciable lesion of the cerebral substance. There was no fracture, nor serious luxation of the cervical vertebræ. In both cases the lungs were very much engorged, and had the dark-purplish tinge of *splenization*. By pressing any portion of the lungs between the fingers, the pulmonary tissues were made to assume their natural colour. The blood was fluid in every part of the body; venous congestion was very marked: the left side of the heart was empty; the right side was full.

The *mark of the rope* around the neck was left, looking as if the skin had been seared with a hot iron; and there was a contusion of the superficial layer of muscles corresponding with the impression on the surface. In Henry, much the heavier body of the two, the sterno-cleido-mastoid muscle was nearly severed, leaving only a few fibres on the right side opposite that on which the hangman's knot was placed.

In the thorax of Moses an abscess was found nearly ready to burst; it contained three or four ounces of pus. This being evacuated, it was ascertained that the 4th and 5th dorsal vertebræ were carious, and the intervertebral substance was nearly destroyed. All the lumbar vertebræ were carious, and an abscess was formed on the right side, containing about half a gallon of purulent matter. On the left side was a smaller abscess. There was also a small abscess on the right elbow-joint. Yet there was nothing in the external appearance or configuration to indicate that he

was not a healthy negro. There were extensive pleuritic adhesions in both cases.

Inspection of the bodies a few hours after the execution showed that there had been an emission of semen (liquor prostaticus?) from both, but no relaxation of the sphincter of the anus or bladder. There was some tumefaction of the face and lividity of the lips; the eyes wore their natural appearance. The jaws were firmly locked; the tongue protruding slightly, and deeply indented by the teeth; *rigor mortis* had not taken place in the limbs. The bodies were still warm.—*Boston Medical Journal*, July.

CASE OF LITHOPÆDION. *BY HR. VIRCHOW.

ON the 4th of April Hr. Virchow examined the body of an insane patient, aged fifty-six years. At the age of twenty-three she had considered herself pregnant: the time of delivery, however, passed by, and she remained childless. She subsequently became insane. The tumour had gradually decreased in size, but was still perceptible.

On examination, the omentum was found atrophied and adherent to the abdominal parietes. An irregular-shaped mass extended from the pelvis to the sternum, having the form and size of an extruded foetus, and was connected in various directions to surrounding parts by vascular adhesions. The cœcum was pushed upwards. The tumour appeared to be situated behind the peritoneum, but was so loosely attached that it was removed without difficulty. The head was found in the region of the left kidney, the nates in the right iliac fossa, the spine in contact with the lumbar vertebræ of the mother, the thigh lay over the uterus, the right arm lay under the sternum, the left arm was in contact with the head, and was attached by firm adhesion.

This mass was united by organised adhesions to another moderate-sized tumour occupying the place of the left ovary, and was connected with the Fallopian tube of that side. This body consisted of two slightly convex hemispheres, which were attached posteriorly to a tolerably smooth fibroid layer. On dividing these, their anterior surfaces presented a rather firmly adherent calcareous layer, deeper still a reddish transparent gelatinous mass, and, lastly, below this appeared a whitish, greasy, fat substance.

The uterus was much enlarged, the vagina greatly contracted, the body of the uterus drawn to the left side: the right side of its fundus enclosed a hard fibrous substance.

* Lithopædion, das steinkind die versteinerte Leibestrucht (an ossified foetus).—Kraus, *Medicinisches Lexicon*.

A microscopical examination determined that the double hemispherical body in the left side of the pelvis was the remains of a placenta. The fatty substance was probably degenerated chorion, and the gelatinous mass consisted of altered blood. The remains of the umbilical cord could be traced from the anterior surface of this tumour, passing between the legs of the foetus to its place of insertion. The foetus was entirely enclosed in a smooth, distinct, thick skin, perforated by vessels from the false membranes with which it was connected, and was studded all over with small calcareous laminae. The head was so continuous with the body that its limits were only indicated by tufts of matted hair. The unaltered cutis was readily detached from the trunk, from which it was separated by a white, tallow-like deposit. Almost all the organs and permanent tissues were in their normal condition; the cerebral matter alone had undergone a change, having been transformed into a dirty, greyish-white, tallow-like mass, which was tightly compressed by the surrounding bones. The female generative organs were perfect; the eyes were present, but much shrivelled.

The author considered that this had been a case of ovarian pregnancy.—*Verhandlungen der Physico-Medicinischen Gesellschaft in Würzburg* 1850.

* * We think that, interesting as this case is on several accounts, it nevertheless scarcely fulfils the definition of its title. X

PATHOLOGICAL DEVELOPMENT OF THE STRIPED MUSCULAR FIBRE.

HR. VIRCHOW relates that, in examining the body of a woman who had died with ovarian disease, he found connected with the tumour a band of flesh-like and fatty tissue, which, under the microscope, exhibited all the characteristics of striped muscle, as seen in the foetus. The elements of this structure were long, tolerably broad, and tapering fibre-cells, generally containing oval nuclei, and exhibiting very distinct stripes. The nuclei were of the proportionate size, and contained one or more shining nucleoli. The nuclei were observed to be attached to the surface of the cell, and, in some parts, to be protruding through the membrane: at these points the stripes were less distinct. The nuclei appeared usually in the direction of the long axis of the cell, and where this was not the case the cell-membrane seemed to have been ruptured. The fibre-cells were so placed one towards the other as to present an imbricated arrangement. In some parts molecules of fat were seen, and some

of the fibres seemed to be undergoing fatty degeneration.—*Verhandlungen der Physico-Medicinischen Gesellschaft in Würzburg*, 1850.

CASE OF CÆSAREAN SECTION. BY H. M. JETER, M.D.

[We transcribe from the *Southern Medical and Surg. Journ.* (March 1851), the following most extraordinary case:—]

On the night of the 4th December last, Mrs. B., aged thirty years, was taken in labour with her sixth child. I was called at three o'clock in the morning to attend her accouchement. I found her with weak and irregular pains, and was informed that such had been their character from the commencement of labour at 9 o'clock. Soon after, however, her pains began to increase, and upon examination per vaginam, I found the os tincæ well dilated and the waters collected in large quantity. The back of the foetus presented; I waited until the mouth of the uterus was more completely dilated, and ruptured the membranes, discharging an immense quantity of water. I proceeded immediately to turn, so far as to bring down the breech, making a breech presentation. The difficulty attending the operation of turning was so great, in consequence of the extraordinary size of the child, (it being very large,) that I regarded it hazardous to attempt to complete the operation, and left it in this situation to the natural efforts of the womb. After about two hours of very hard labour the breech so far advanced as to enable me to bring down the feet. I essayed by every possible means to assist the efforts of the uterus, by making all the traction upon the inferior extremities of the foetus that was warrantable, being convinced that the foetus was dead.

Finding all efforts to make any further advance in its delivery entirely fruitless, I attempted to perforate the cranium, but found it impossible, in consequence of the size of the child, to pass the perforator up to its head. I then eviscerated the foetus, with the view of passing the instrument up within the cavity of the foetal thorax to the base of its cranium. This also failed to make room for the operation, without proceeding at random and great consequent hazard to the mother, as I could not insert the hand to give any certain direction to the instrument, the head being still entirely above the superior strait. Embryotomy was therefore determined upon, and after dissecting away the foetus up to its axilla, which required about two hours, the mother all the while suffering the most severe labour, but which at this time had ceased to make any impression upon the child, and which induced me to conclude that the

uterus had probably ruptured, I found her rapidly sinking; so much so, indeed, that we did not think that she could survive fifteen minutes longer. I determined at once to operate on the Cæsarean section. I gave my patient a stimulant, and, assisted by Dr. Reese, proceeded to make an incision along the linea alba, six inches in length, cutting down carefully to the peritoneum, upon dividing which, the head of the foetus presented, showing that my apprehensions were correct in the womb's having ruptured some time previous to the operation. The head of the child was so large that the incision had to be extended to ten inches in length to admit its passage. The head measured twenty-nine inches and four lines in its longitudinal or occipito-frontal circumference, and twenty-eight inches two lines in its perpendicular circumference, being hydrocephalic. The head and remaining portion of the body being removed, the placenta was found also without the uterus within the cavity of the abdomen, and the uterus contracted to about the size of a small cocoa-nut. This being also removed, the cavity of the abdomen was left filled with coagulated blood, from the hemorrhage which took place at the time of the rupture of the womb. Having carefully removed the blood as completely as possible, the wound was closed by the interrupted suture and adhesive straps, leaving a space of about two inches at its inferior extremity, for the discharge of the fluids that might remain or collect in the cavity of the abdomen.

Stimulants were given, and other applications made, to revive the sinking energies of the patient, which had become almost extinct. Reaction soon took place, and she was cleansed and placed in as comfortable a position as the circumstances would admit. The vital energies having been sufficiently resuscitated, opiates were given freely. She was kept quiet, and rested comfortably during the night and the following day, until about 9 o'clock on the succeeding night, (the 6th,) when she was taken with violent vomiting, which continued, with intermissions of not more than half an hour, until 10 o'clock the next day, at which time I arrived, having been called off the evening before, and could not return sooner.

We succeeded in soon checking the vomiting, and she rested easy, with occasional return of the vomiting during the day and following night.

Dec. 8th.—Patient complains of some soreness about the womb, and over the abdomen generally, which is considerably swollen; pulse 132, and very restless. Administered a clyster, which produced two evacuations; gave her to drink small quantities of cream of tartar and lemonade.

9th.—Patient complains of great soreness and tenderness of the abdomen, which is greatly swollen; tongue dry and red, and great thirst; pulse 140, quick and hard; lochial discharges ceased. Put her upon a treatment of calomel and opium; gave injections of warm milk and water per vaginam, and applied flannel, wet with spts. turpentine, to the abdomen.

10th.—Soreness and tenderness not so great; discharges from the wound in the abdomen free; lochial discharges also free; pulse 136. Gave clyster, which produced one evacuation.

11th. Soreness and swelling still subsiding; pulse 130, more soft and full; lochial discharges, and those from the wound in the abdomen, continue freely. Gave small quantities of Dover's powder.

12th.—Had one copious alvine discharge during the night, of natural consistence—says she feels much relieved since. The discharges all continue free; pulse 130; wound healing kindly. From this time, nothing of importance occurred to require noting. She continued to improve, and by the 18th day after the operation the wound was entirely healed.

I visited her yesterday for the last time, which was the 29th day since the operation, and found her sitting up by the fire, directing the domestic affairs of her family. Mrs. B. is a woman of apparently very feeble constitution, and had been confined to her bed, for two months previous to her labour, with general anasarca of the whole system.—*American Journal of Medical Science.*

INFLAMMATION OF THE LARYNX FROM ACCIDENTAL CAUSES.

THE three following examples of inflammation of the larynx, brought on by accidental contact with irritating substances, may not prove uninteresting:—On the 20th September, 1849, I visited a lady labouring under premonitory symptoms of cholera, and prescribed the acetate of lead and opium pills in my usual form: they were quite effective in stopping the further progress of the disease, but one went the wrong way,—or, in other words, in the attempt to swallow it, passed into the larynx, and thus gave rise to fits of coughing, frequently repeated, until at last it was expectorated. These pills, being soft, were easily dissolved, and consequently, though the foreign substance remained in the air-passages but a short time, yet that time was sufficient for the contact to give rise to an inflammatory affection of the mucous membrane of the larynx, and a consequent hoarseness, which lasted for nearly a week. In this case the irritative substance was the acetate of lead undiluted.

In the case I am about to mention next, irritation was caused by the vapour of

nitric acid, and the occurrence took place in the following unexpected manner:—I was requested, at the desire of Dr. Mahood, of Kingstown, to see an old lady labouring under chronic bronchitis. Amongst other remedies, I advised the application of St. John Long's liniment to the chest: it was sedulously applied night and morning. The room in which the patient lay was small; and a child, about two years old, slept in the bed next her, and was exposed to the inhalation of the air tainted with the vapour of the liniment: laryngeal cough was the consequence; it lasted for a few days, but was immediately diminished by the child being removed to another room.

In the third case more serious consequences had nearly followed a somewhat similar accident. I was attending, with Mr. Hans Irvine, a gentleman who had a chronic enlargement of the liver, and we advised the application of a nitro-muriatic acid lotion. His mother procured a bottle from a neighbouring apothecary, who marked it "concentrated nitro-muriatic acid." She proceeded to mix some of this with water, for the purpose of making the lotion, when the fumes arising from the bottle caught her breath, and produced inflammation of the larynx, and of the bronchial tubes, which had nearly proved fatal. I blame myself for not having taken the precaution to order diluted acid to be used in making the lotion.—*Dr. Graves, in Dublin Quarterly Journal, Feb. 1851.*

TRIAL OF DR. SPENCER (U.S.) FOR MAL-PRACTICE.

DR. SPENCER, of Milwaukie, Wisconsin, has been tried before the Circuit Court of that State for alleged mal-practice, and, as we understand by the published report of the trial, was honourably acquitted. The declaration alleges—1st, The giving of large doses of colomel; 2d, Unskilful administration; 3d, Negligence. The case was one of simple *necrosis* or *caries of the jaw*, in a little girl between four and five years of age, attended with secondary salivation, coming on after dysentery. It was most substantially shown, by good authority, that calomel might be used in such cases (dysentery) with the best effect. It was also stated by Dr. S. *that he did not use any calomel in this case*; and the circumstances and evidence of symptoms, which were testified to by the physicians on the stand, fully corroborated his statement. We had a case some two years since, in a girl of about the same age, wherein caries and necrosis followed an attack of dysentery. We neither used calomel, nor were we subjected to a suit because such diseased action took place in the bones of the little girl. If people could be made to fully understand that there may be a *predisposition* to certain diseases,

and that such diseases may be aroused by some exciting cause, we are of opinion that the profession would not so often be assailed and vexed by suits for mal-practice.—*Boston Med. Journ.*

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 29.94
 " " " Thermometer^a 63.8
 Self-registering do.^b Max. 95° Min. 42°
^a From 12 observations daily. ^b Sun.

RAIN, in inches, .71. — Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 2° above the mean of the month.

BIRTHS & DEATHS IN THE METROPOLIS During the Week ending Saturday, Aug. 23.

| BIRTHS. | | DEATHS. | |
|-----------|------|-----------|-----|
| Males.... | 772 | Males.... | 502 |
| Females.. | 683 | Females.. | 454 |
| | 1455 | | 956 |

CAUSES OF DEATH.

| | |
|--|-----|
| ALL CAUSES | 956 |
| SPECIFIED CAUSES | 944 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 314 |
| <i>Sporadic Diseases, viz.—</i> | |
| 1. Dropsy, Cancer, &c. | 44 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 96 |
| 4. Heart and Bloodvessels..... | 18 |
| 5. Lungs and organs of Respiration | 72 |
| 6. Stomach, Liver, &c. | 63 |
| 7. Diseases of the Kidneys, &c. | 13 |
| 8. Childbirth, Diseases of Uterus &c. | 9 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 8 |
| 10. Skin..... | 0 |
| 11. Premature Birth..... | 0 |
| 12. Old Age | 39 |
| 13. Sudden Deaths..... | 6 |
| 14. Violence, Privation, Cold, &c.... | 18 |

The following is a selection of the numbers of Deaths from the most important special causes:

| | | | |
|--------------------|-----|------------------|-----|
| Small-pox..... | 16 | Convulsions..... | 27 |
| Measles..... | 16 | Bronchitis | 33 |
| Scarlatina | 18 | Pneumonia | 22 |
| Hooping-cough | 24 | Phthisis | 126 |
| Diarrhoea..... | 143 | Lungs | 7 |
| Cholera..... | 20 | Teething | 11 |
| Typhus..... | 41 | Stomach | 8 |
| Dropsy | 15 | Liver..... | 9 |
| Hydrocephalus | 20 | Childbirth | 4 |
| Apoplexy | 23 | Uterus | 4 |
| Paralysis | 18 | | |

REMARKS.—The total number of deaths was 97 below the average mortality of the 34th week of ten previous years. The fatal cases of Cholera are of the common kind, and have occurred chiefly among young children.

NOTICES TO CORRESPONDENTS.

RECEIVED.—Mr. F. J. Brown—Anti-Quack.

It is requested that Proofs, when corrected, be returned addressed to the printers, Messrs. WILSON AND OGILVY, 57, Skinner Street, Snowhill, London.

Lectures.

NOTES OF CLINICAL LECTURES,

(Delivered at Guy's Hospital).

BY JOHN HILTON, ESQ. F.R.S.

Surgeon to the Hospital.

Observations on a Case of Fractured Cranium—continued.

IN my last lecture, gentlemen, I was referring to a case which required a careful and attentive consideration of all the external symptoms, as manifested by the patient; for it was these, and these alone, which we had to guide us in forming a diagnosis, and in arriving at an appropriate plan of treatment. You will remember I placed before you the report of the case, as far as the death of the patient; and having proceeded with an examination and an inquiry into the symptoms, I concluded by telling you that I should resume this subject when I next met you, and afterwards proceed to the post-mortem appearances, so that we might be enabled to see how far the conclusions we had arrived at from observation and induction coincided with actual dissection.

In performing the operation of trephining, you observed I did not have the patient removed to the operating theatre, nor even disturbed from his bed. This may appear to you a matter unworthy of consideration, but I can assure you it is one of the gravest importance to the patient; for more instances than one have occurred within my own notice, where the patient, on being removed incautiously to a more convenient situation for operating, has died suddenly; from the heart—enfeebled and embarrassed by the existing nervous lesion—failing to act, or to maintain the cerebral circulation, when the patient's head was raised. At the conclusion of last lecture I told you that, on elevating the trephined bone, a clot of blood was observed exactly in the position we had prognosticated. Scarcely a shadow of doubt could be entertained about this being arterial blood; for, independently of its locality, it was of a firm and solid consistence, a condition rarely presented by venous blood when effused into the living body; it having a much less disposition to coagulate than arterial blood under these circumstances. The patient being somewhat collapsed after the operation, it was necessary to administer to him stimulants just sufficient to maintain his heart's action, and no more. He therefore

required constant watching, for the purpose of carrying out this limited intention.

At 5 P.M. on the 22d—that is, six hours after he was operated on—the report says, “He can now move his left arm and leg, and does so when these parts are pinched; which, previous to the operation, was not the case; also, of his own accord, he sometimes raises his left leg in bed.” This was a most important sign of improvement, and an indication of some progressive change towards the restoration of the natural function of the injured parts, and was calculated, therefore, to lead us to entertain some slight hopes of future recovery. Such hopes, however, were not long justified, for after but a transitory period of improvement he again relapsed into his former condition, afterwards got gradually weaker, and at 6½ P.M. on the following day he expired. Some hours previous to his death, and after his being trephined, his left extremities were observed to be much warmer than his right, although both were exposed to similar external circumstances. It is evident, therefore, that as this increased temperature of the affected side was not dependent on any external influence, it must have resulted from some difference in the vital actions of the two sides of the body; and I believe this preternatural or excess of heat on the paralysed side to be connected or associated with some inflammatory action existing in the nervous centre, from which the nerves distributed to the affected or preternaturally heated parts take their origin. I am not prepared exactly to affirm this to be the true interpretation of this symptom, but it is decidedly my impression that it is so.

The proper object of a clinical lecture, I have already told you, I believed was to analyse, and if possible to explain, every symptom presented by the patient,—which will be a sufficient justification for my thus dwelling on these facts, which might otherwise appear to you to have no practical bearing. I am anxious, also, to enter fully into the explanation and cause of the symptoms we here encountered, not only that you may know and be made aware of them, but that you may be induced hereafter in practice to investigate and unravel in a similar manner such symptoms, which perhaps at first sight may appear inexplicable; as I feel convinced you will thus recognise many causes of disease which would otherwise have been passed over unnoticed.

In conclusion of this part of our subject, let us briefly recapitulate the conclusions we have deduced from an attentive examination of the symptoms which the patient manifested. These are,—fracture of

the base, across the ethmoid bone; laceration of a branch of the middle meningeal artery, followed by effusion of blood between the bone and dura mater; and laceration of the cerebral substance. We shall now see how far our diagnosis was correct, and to what extent our premises were corroborated by the evidences which a post-mortem examination revealed.

Inspectio cadaveris twenty hours after death.—An oblique fracture of the skull, on the right side, extending from the centre of the parietal bone downwards and forwards to the greater wing of the sphenoid, where it appeared to terminate: this fracture was only through the outer table at its upper part, but through both tables of bone inferiorly and anteriorly, where it passed obliquely over the course of the branches of the middle meningeal artery. At the base of the skull was a fracture of the cribriform plate of the ethmoid bone, extending also across the inner half of the orbital plate of the frontal, near its posterior edge. Beneath the cribriform plate was found a quantity of coagulated blood, with fracture across the ethmoid cells and os planum of the ethmoid bone.

Considering the circumstances of the accident, and the nature of the patient's injury, which arose from a diffused blow on the head, received in a fall from a great height, I think it extremely unlikely that two disconnected fractures should occur in the positions noted, and it is therefore exceedingly probable that a connection existed, although it was not traced on dissection. This is an easily intelligible circumstance, considering the situation of the parts through which it would extend, and how difficult it would be to obtain a proper view of it from below, pursuing the ordinary method of examination, and without much disfiguring the appearance of the subject.

Between the dura mater and bone on the right side, a large regularly defined clot of blood was found, nearly an inch in thickness in the centre, and situated opposite and extending above the squamous part of the temporal bone: just in front of the centre of this clot was the position where the bone was trephined. The dura mater towards the front of the clot slightly lacerated; and on its inner side, at this point, a very small thin coagulum of blood was apparently perceptible: everywhere else the inner surface of the membrane presented an appearance entirely free from injury. On the opposite side of the head, also between the bone and dura mater, a much smaller clot of blood—apparently the result of *contre-coup*—which was not of sufficient extent to cause any appreciable indentation in the cerebral substance; whilst, on the con-

trary, that first referred to produced a large deep diffused fossa, corresponding to its form and size, on the external surface of the hemisphere.

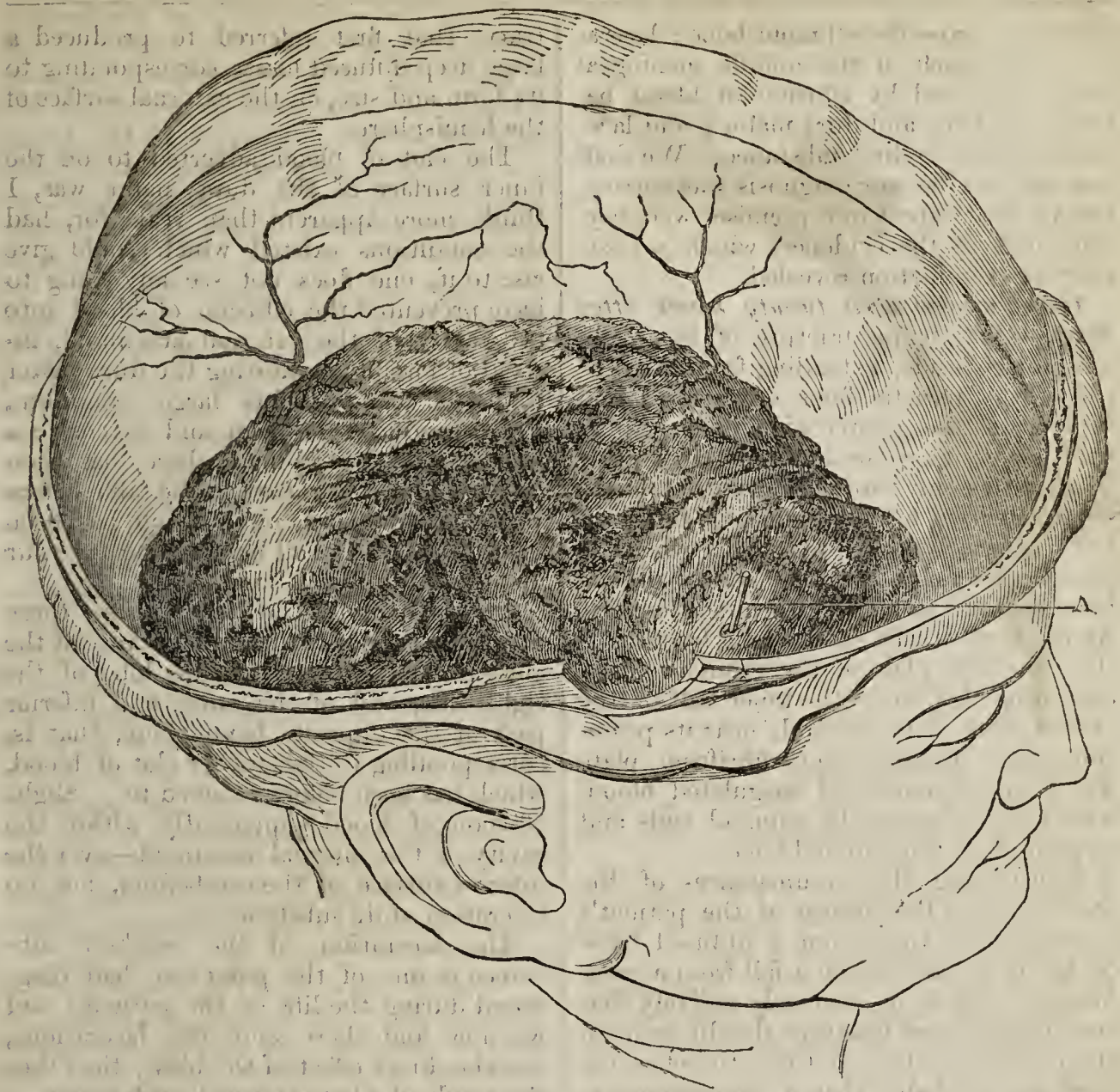
The clot of blood adverted to on the inner surface of the dura mater was, I think, more apparent than real; for, had the conditions existed which could give rise to it, one does not see any thing to have prevented the effusion of blood into the cavity of the external arachnoid, instead of forcibly separating the dura mater from the bone. This large coagulum, which produced so deep and extensive a fossa in the cerebral hemisphere, has been preserved, and is placed on the table before you: the drawing, also, which has been taken from it, I shall hand round for your inspection. (Fig. 1, next page.)

Proceeding with the examination, there was laceration of the brain substance of the anterior part of the middle lobe of the right side, and of the outer and inferior part of the opposite hemisphere, that is, corresponding to the smaller clot of blood, which has been before referred to. Slight effusion of blood—apparently within the cavity of the internal arachnoid—over the inferior surface of the cerebellum, but no laceration of its substance.

The laceration of the cerebral substance is one of the points we had diagnosed during the life of the patient; and we now find there were two lacerations, one the direct effect of the blow, the other the result of what is termed *contre-coup*.

The walls of the right lateral ventricle were closely pressed together, from the outer wall being thrust inwards by the pressure of the clot of blood between the bone and dura mater. The left lateral ventricle presented a natural and healthy appearance, and the fluid it contained was colourless, and in quantity about that usually observed. In the interior of the right lateral ventricle was a small quantity of thin fluid, tinged of a red colour; also a small ragged clot of blood projecting from an opening or laceration, with irregular edges and of about three-quarters of an inch in extent, situated across the anterior part of the corpus striatum, and reaching deeply nearly as far backwards as to the substance of the optic thalamus. In the third ventricle, also, a small thin clot of blood, continuous with one found in the fourth ventricle, by a small cord of coagulum, which modelled the form of the *iter a tertio ad quartum ventriculum*. The large coagulum beneath the cranium, and external to the dura mater, on the right side of the head, arose from the laceration of a large branch of the middle meningeal artery; and the aperture through which the escape of blood took place was sufficiently large to admit a small probe.

FIG. 1. A CASE OF FRACTURED CRANIUM.



A, Probe introduced into the ruptured meningeal vessel, from which the effusion took place, and which was situated just in front of the position where the bone was trephined.

The small clot of blood which was observed projecting from the corpus striatum is an entirely new feature in the case, having completely escaped our notice during life. The corpus striatum and optic thalamus, I told you in my last lecture, were pretty certainly ascertained to be associated with sensation and volition of the upper and lower extremities of the opposite side of the body. It is evident, therefore, that there were two causes existing in this patient either or both of which would account for the hemiplegia which the patient manifested. The lesion in the interior of the brain might have produced it, as well as the large clot found on the exterior; but the latter cause being quite sufficient to account for all, left us no grounds for diagnosing any other lesion: it is thus easily comprehensible how this entirely escaped observation during the life of the patient. The clot

of blood which was removed from the third and fourth ventricles has been preserved, and is placed on the table before you; it is worthy your attention, as showing how beautifully the connecting cord between the two models has the form of the *iter a tertio ad quartum ventriculum*, and what an exact cast the one from the fourth ventricle represents of that cavity, thus indicating the extent of pressure to which the structures forming the walls of the entrenchments must have been subjected. (See fig. 2, next page.)

Having now completed the analysis of the case and the report of the post-mortem appearances, we see how closely the deductions we had arrived at, merely by an attentive and careful examination of the symptoms, coincided with actual observation; and that there was only one point, the lesion of the corpus striatum, that escaped our diagnosis.

FIG. 2.

Drawing of the clot of blood found in the interior of the brain.



- a*, Portion corresponding with the third ventricle; *b*, with the iter a tertio ad quartum ventriculum; and, *c*, the fourth ventricle.
- d*, Space corresponding with the soft commissure of the third ventricle, and *e*, with the anterior commissure.
- f*, Small mammillary process corresponding with the iter ad infundibulum, in the floor of the third ventricle.

In rupture of the meningeal vessels from fractured cranium, I think I am justified in saying it always happens that the seat of laceration is on the outer side of the vessel, or on that side directed towards or next to the bone. A laceration on the inner side would be an occurrence of extreme rarity. Hence it is probable that the edges of the fractured bone, although they suffer no depression or permanent displacement, tear through the coats of the artery by the momentary yielding, which, it is plausible to infer, takes place at the time of the accident or injury. This may appear to you a matter of but little interest and unworthy of much consideration; but suppose, when in practice your evidence may be required in a court of justice, the question may be put to you, and your opinion asked, as to whether it is possible for a fracture to produce laceration of an artery, when there is no depression of bone, no visible existing displacement capable of tearing through the coats of a vessel; may not the lesion have occurred, from some cause or other, quite independent of the fracture? in fact, may it not have been

a mere coincidence, and quite unconnected with it?

From the consideration of the healthy anatomy of the bones of the head, taken as a whole, we learn what beautiful adaptations nature has made for protecting the soft and delicate structures of the brain, and preventing their receiving any injurious effect from the sudden movements and varied blows to which the head is ordinarily or occasionally exposed. We find certain elevations of bone proceeding from the circumference of the interior of the skull towards the centre, and terminating at points surrounded by cerebro-spinal fluid, and not in immediate connection with the cerebral mass; an arrangement doubtless intended for the purpose of conducting vibrations, derived from blows or other injuries on the exterior, to localities where they may become diffused in fluid, and thus considerably broken or arrested before their transmission to the brain itself. Were it not for this provision, the human subject would be constantly exposed to danger from those slight concussions which are of every-day occurrence, and which do not usually even excite our attention. The only explanation I can give you of the course which the fracture took in the case before us, is from a knowledge of these laws, the direction of the fracture being almost precisely that in which the vibrations are conducted.

In severe injuries of the head, lesions on the opposite side to that on which the blow is sustained are not of unfrequent occurrence, and result from what the French term *contre-coup*—a re-meeting of the vibrations, produced by the original blow, which takes place exactly opposite to the primary injury.

Effusion of blood from rupture of a meningeal vessel exerts on the surrounding parts great force, the blood acting as a wedge, and gradually separating the dura mater from the bone, sometimes to a very great extent. As the result of this separation, the consequences in relation to the bones will vary according to the period of life in which it happened: if in old age, or after the middle period; when the vascular circulation is less active than in youth; the removal or separation of a membrane, containing the nutritious arteries, acting, in fact, as almost the only source of nutriment to the bones, must and does naturally lead to death or necrosis of the denuded bony surface. In early life, however, the same occurrence—the separation of dura mater from the bone—does not always lead to the same results; for, during the growth of the different tissues of the body, their arterial supply is much greater

than subsequently, and in the case of the bones of the head, the anastomosis between the vessels of the interior and exterior of the cranium is so free, that a removal or separation of a portion of the dura mater does not necessarily lead to necrosis, the vascular supply derived from the extensive anastomoses on the exterior being sufficient to maintain the bone in a state of integrity until a reparation is effected.

On carefully considering the facts of the case, especially the history of the accident, and reflecting on the two separate cerebral lesions discovered on dissection, one in the interior of the brain, and apparently having no connection, as to origin or otherwise, with the other on the exterior,—I say, considering these circumstances and others, which I shall notice, one is left in considerable doubt as to the true nature of the primary cause. This remark may create some little surprise and astonishment; but I think I shall be able to prove to you that the case is not quite so clear as would at first sight appear, and that a serious question might be raised against the recovery of compensation, for example, in the event of a trial on the part of the friends for the recovery of damages. There was no depression of bone on the injured side of the head to explain the lesion of the corpus striatum, no continuous injury through the brain-substance from the lesion of the exterior to that of the interior, and no reason to believe that any connection between the two existed; on the contrary, exceedingly improbable that such could have been the fact. We are even justified, I think, in going still farther, and asserting that there were no grounds for believing that the effusion of blood into the ventricles resulted from the accident, and it would be next to impossible for the pressure of the clot on the exterior to have produced it. Hence, it seems extremely likely that it took place before the accident, and that it was even the cause of it: in other words, the man became the subject of an apoplectic seizure, whilst working at a great height, which led to his fall, and the injuries which he thereby sustained. This becomes, then, a very important consideration in a legal point of view; and a case which, at first sight, appears purely the result of accident, turns out under a more deep and rigid investigation to be one originating in a natural cause, preceding and giving rise to the fall and subsequent injury. It is stated in the report that the man fell from the scaffold without obvious cause to those present, which appears now easily explicable and intelligible since the death of the

patient, from the additional information obtained on a post-mortem examination; and we have, I think, sufficient grounds for believing the history of the case to be pretty accurately made out, as follows:—That our patient, whilst engaged in his ordinary avocations as a bricklayer's labourer, became the subject of an apoplectic seizure, and, as a result of this, fell from the scaffold on which he was working, and which was situated at a height of about thirty-five feet. He was picked up—as might have been expected—in a state of insensibility, and was immediately brought to the hospital, where he remained until his death two days afterwards. The injuries he had sustained were of the most severe and extensive nature, and such as to render his recovery almost impossible. The lacerated scalp-wound was sufficiently obvious, and the fractured cranium and rupture of the meningeal vessel we diagnosed from certain symptoms which the patient manifested. From the ruptured vessel, effusion of blood took place between the bone and dura mater, which demanded the operation of trephining; and, after this, he began to improve for a few hours, but soon again relapsed into his former condition, became more and more comatose, and ultimately died from compression caused by the lacerated brain, and the effusion of blood into the ventricles, which lesions existed in addition to those already enumerated.

The clot of blood found on dissection in the fourth ventricle, we may conclusively infer, completely filled this cavity during life, for it exactly corresponded to it in shape, and, in fact, as I have said before represented a cast or mould of this space. It was this clot, I believe, which caused the man's death; namely, by its pressure on the medulla oblongata—the most essential portion of the nervous mass, its integrity being necessary for the performance of the functions of respiration and deglutition. The removal of a part of the pressure, from the coagulum on the exterior of the hemisphere by the operation of trephining, possibly allowed a fresh escape of blood to take place from the laceration of the corpus striatum; which blood passing into the fourth ventricle pressed upon the medulla oblongata, and produced death. This, I think, seems to explain why, after a temporary relief, his symptoms again progressively increased in severity until his death.

Having thus far proceeded with a scrupulous investigation of the whole facts of the case, the question—and an important question it is too—next arises: Could any thing more have been done, in point of treatment, for the benefit of our patient?

did, in fact, the information revealed on the post-mortem examination lead us to wish that other means had been adopted during life? This question, I think, may be pretty fairly and satisfactorily answered in the negative; and the case confirms by its own evidence—if confirmation be wanted—that, in all instances, where we have certain symptoms present, these being the symptoms of compression from effusion of blood, the operation of trephining ought to be had recourse to.

If, then, in after-practice you meet with a patient presenting some such history as the following, you will be prepared as to what plan of treatment to adopt:—A man having fallen from a height, or having otherwise sustained some injury to the head, shows slight signs of insensibility; he is, at first, labouring under concussion, and has no paralysis of either side; in a few hours he presents symptoms of commencing paralysis, and, in a few hours more, this paralysis becomes much more or nearly complete; his breathing also is heavy and laborious, and he lies in a state of coma or insensibility. Such symptoms, Gentlemen, almost certainly denote compression of the brain from effusion of blood, and indicate the operation of trephining, which ought to be immediately and unhesitatingly resorted to. The decussation of the fibres in the medulla oblongata point to the practical fact that the trephine must be applied on the side of the head opposite to that on which the symptoms of paralysis are manifested, no matter on which side the blow or injury may have been inflicted, for the lacerated vessel and effusion of blood may arise either from the direct blow itself, or from the *contre-coup*: in the one case the compression will be on the same side as the external injury; in the other, on the opposite side.

It is one of the greatest triumphs of surgery, and the greatest satisfaction a practitioner can experience, to relieve a patient in this condition, and watch the recovery of a case which must otherwise have inevitably resulted in a fatal termination.

In concluding the subject, I will mention two cases exceedingly pertinent to the one under consideration, which will illustrate and confirm the views I have laid before you. The first is that of a man who was in the hospital, under Mr. Coe's care, in September 1841. He had fallen from a height, and pitched on his head, from which he sustained a lacerated scalp-wound, but no fracture of the cranium. He remained perfectly sensible for some hours after the accident, then became incoherent, and, in a few hours, more completely unconscious, with rapid stertorous

breathing, and marked paralysis of one side. His condition was considered almost hopeless; but it was thought advisable to give him the only chance that remained. The trephine was accordingly employed, and a large clot of blood found between the bone and dura mater. Immediately the piece of bone was raised the man showed evident signs of improvement, and afterwards completely recovered; being, in fact, at the present time, alive and perfectly well. I need scarcely say to you that, in this instance, had not the trephine been employed, the man must have inevitably died. The other case was that of a boy who had fallen from the pole of a timber waggon on his head. He presented the same train of symptoms as the man I have just referred to, and it was satisfactorily ascertained that he was labouring under compression, from the progressive effusion of blood between the bone and dura mater. No operation, however, being performed, the boy died; and, on post-mortem examination, a clot of blood was discovered between the bone and dura mater, as diagnosed during life, but no other cerebral lesion whatever. Had the trephine been here employed, there is every probability the boy would have recovered. Many such cases as these have been recorded, and unmistakeably point out the means that always ought to be had recourse to.

IMPERFORATE RECTUM; LACERATION OF THE INTESTINE. CASE REPORTED BY DR. B. E. COTTING.

THE child, a female, was born on the afternoon of the 8th instant; on the 10th, at 3 P.M., Dr. C. saw it in consultation, and found it almost pulseless; abdomen tender and tympanitic; passed the little finger half an inch or more up the intestine, and was met by a firm, fleshy resistance; no operation was attempted, and the child died in about four hours. On dissection, the abdomen was found distended with gas; and in the cavity was a large quantity of meconium, with here and there some redness, and a small patch of lymph upon the peritoneal surface. As usual in such cases, there is a small portion of intestine below, with about the same extent of imperforation. Just above this last, there are seen two longitudinal rents, an inch or more in length, which extend through the outer coats, and one through the entire parietes. The intestine, which was exhibited, has not now the appearance of having been much distended; and neither does it show any signs of inflammation, externally or internally.—*American Journal of the Medical Sciences.*

A COLLECTION OF FACTS ILLUSTRATIVE OF
THE
MORBID CONDITIONS OF THE
PULMONARY ARTERY,
AS BEARING UPON THE TREATMENT OF
CARDIAC AND PULMONARY DISEASES.

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[Continued from vol. xlii. page 529].*

Ulceration of the Pulmonary Artery
(continued).

THE lesions presented in the following remarkable case, which occurred within my own observation, were of so singular and so obscure a character, that I am doubtful whether to ascribe them to ulceration, or to softening of the tissues of the valves, the result of acute inflammation superadded to disease of old standing. Whether the destruction of the entire valvular apparatus occurred suddenly, or was the gradual result of chronic changes, must now, I fear, remain unexplained:—

E. C—, aged 19, a servant, of pale aspect and heavy appearance, whose habits had been rather irregular, was admitted to Guy's Hospital, Nov. 9th, 1851, with symptoms of renal anasæra, which had been increasing for the last four months, until five weeks prior to her admission, when the swelling of the body became nearly general. Upon her admission the anasæra extended over the whole of the body and the face. The breathing was 38, not painful, unless when she was on her back; pulse 106. Cough, from which she had suffered for some time, had been more troublesome at night for the last fortnight, but she did not expectorate. The urine was small in quantity, and albuminous. The right side of the chest, below the clavicle, was resonant on percussion; the left, in the same spot, dull, with rcoing sibilant rales: posteriorly there was also dullness on both sides. The heart's sounds were regular. She appeared to improve under treatment for a few days, having perspired very freely, and slept better.

On the 13th, the pulse was observed to be irregular. For about three weeks from

this date, the œdema, cough, and difficulty of breathing, continued to vary, as the skin and bowels were, or were not, acted upon. During the last two or three days of her life the heart's action was observed to be indistinct, and she became much depressed; the skin was dry; the pulse varying, at different times, from 88 to 100, and very feeble; the countenance swollen, with dark areolæ round the eyes. She complained of nausea, and much pain in the right lumbar region, passing up to the shoulder; but, on the evening of the day before her death, the bowels having acted copiously, she perspired very freely; the breathing still continued laborious, with much wheezing. On the day of her decease (Dec. 3d) the features appeared shrunk, the dark areolæ still surrounding the eyes. She had slept very little; the pulse 100, and feeble; the tongue rough and furred: the skin dry, the breathing laborious, and there was entire suppression of urine. Her debility was so great as to require a free administration of stimulants. She gradually became weaker towards the close of the day, shrinking down in the bed, and, at about five o'clock, P.M., she expired.

Sectio Cadaveris.—Each pleural cavity contained a little serum, and the right lung was partially coated with loose fibrine; the lungs were generally œdematous, and there were traces of pneumonia (grey hepatization) at the upper part of the right. The rima glottidis was œdematous; the heart did not appear enlarged; the walls of the right ventricle were rather thick, but its cavity was of very moderate size; it contained a good deal of dark coagulum. The *pulmonary valves* were almost entirely destroyed; no trace of pouches remained, and merely a few thin tattered slips adhered to the lines where the erecents had been attached. A flattened mass of fibrinous coagulum, which had in great measure lost its colour, adhered to the spot where the left and anterior curtains had joined. Between the origins of the right and left pulmonary branches an oval fibrinous mass, as large as a hazel-nut, adhered to the lining membrane of the vessel; it was firm, appeared to have undergone contraction, and contained earthy particles. It evidently interfered with the passage of the right pulmonary branch, which appeared narrow, and corrugated internally, and in a less degree than that of the left. The parts above and below the orifice of the vessel were of a purplish red colour: the lining membrane here was loose and irregular, detached at some spots, and raised by patches of atheromatous deposit in others; but the endocardium of the ventricle generally did not appear diseased. The walls of the left ventricle were rather

* An apology is due to those readers who may have felt interested in the development of the present inquiry, for the long delay which has occurred in the completion of my memoir. The fact that I last addressed them from the banks of the Thames, and that I now write on the margin of the Karnaphuli River in Bengal, conveys my excuse. I am happy to say that the concluding chapters of my MS. are now in the Editor's hands.

thick, and its cavity by no means large; the aorta was small and healthy: the liver was enlarged,* soft, and much congested; the spleen was enlarged; the kidneys were white, large, flabby, and mottled.

It is much to be regretted that, in this case, owing to the very ordinary character of the symptoms, attention was not particularly called to the state of the heart during life. It was considered, by some of those who witnessed the inspection, that the destruction of the valves was the result of acute inflammatory softening; still, the disease seemed to be extremely localized, and it appeared to me that the reddening of the artery and parts adjacent was due rather to the imbibition of blood by the loosened and diseased surface, than to acute inflammatory change. From the circumstance of a mass of coagulum, partially deprived of its colouring matter, adhering to a spot which once must have given attachment to portions of the curtains, it is evident that the patient had survived the destruction of the valvular apparatus for several days at least,—possibly for a far longer period. The presence of atheromatous deposit, and of an earth-infiltrated clot in the ascending portion of the artery, showed that this vessel had long been the seat of extensive disease: this, together with the obstructed condition of the main branches of the artery, with the additional impediment to the pulmonary circulation which resulted from the pneumonic and pleuritic effusions, must have exposed the valves to constant and long-continued violence, under which, it is probable, they at length became ruptured and destroyed. The ill effects of this extensive lesion were, doubtless, in a great degree mitigated by the strength of the right ventricle.

The following is a brief abstract of cases involving remarkable abnormal conditions of the pulmonary artery, which have been recorded, or which have occurred, more or less, within my own observation (these latter are marked “seen”) since the publication of the earlier chapters of this memoir:—

A single ventricle giving off a single artery (aorta), which distributes two branches to the lungs.—Male child, well developed, but cold and livid. Attacks of dyspnoea, in one of which it died, seventy-eight hours after birth. The father said to labour under heart disease. A single auricle of large size receiving the cavæ, two pulmonary veins, and the coronary vein. Auriculo-ventricular opening of large size, and provided with an imperfect valve. The

ventricle well developed. The aorta, guarded by three simular valves, gave off, from its posterior part, two pulmonary branches. Coronary arteries not given off at the aortic sinuses, but a single vessel, which appeared to have originated from the concavity of the arch above the pulmonary branches, passed down in contact with the left side of the aorta, and divided at its root into two branches, which were distributed upon the anterior and posterior aspects of the heart (a very similar arrangement observed in the heart of a calf. M. T. Weber, *Observatio Anatomico Path. de Cord. Univert, e quo unus tantum truncus arteriosus surgit.* Bonnæ 1832). M. Foster, Report of Proceedings of the Pathological Society of London, 1846-7. *Seen.*

An imperfect, but apparently similar, specimen from a cyanosed child, which died at the age of ten weeks, from convulsions of eight or nine days standing. The respiration had been free.—Dr. Crisp, *Ibid.*

Obliteration of pulmonary orifice.—The ascending portion of this vessel obliterated. The foramen ovale, ventricular septum, and arterial duct, remaining pervious in a cyanosed male child, eleven months and two weeks old. Dr. Peacock, *LONDON MED. GAZ.*, March 31st, 1848.

Also the following interesting, but imperfect, cases:—

Obliterated pulmonary artery.—Foramen ovale and ventricular septum pervious. Heart evidently that of a child at least several weeks old. Author, *LONDON MED. GAZ.*, Dec. 31st, 1847.

A dumb cyanosed female, ætat. 12 years, always delicate; subject to palpitation and dyspnoea on exertion, and to cough and pain in the side: death apparently from bronchitis. Both ventricles slightly hypertrophied, and of nearly equal thickness, opening in ventricular septum. *Ascending pulmonary artery* not discoverable? foramen ovale closed. Lungs of natural size. Unfortunately the arch was not preserved. (Case slightly alluded to in my memoir.)—Dr. Crisp, *Trans. Lond. Path. Soc.*, 1847. *Seen.*

Pulmonary orifice contracted. Lungs partially supplied by enlarged bronchial arteries.—Man, ætat. 19, cyanosed. There appears to have been great contraction of the *pulmonary artery*. *Bronchial arteries and arteria comes nervi phrenici* unusually large and tortuous; the latter terminated in the lung. The lungs presented tubercles at different parts. *Foramen ovale open. Arterial duct* closed.—Mr. F. Le Gros Clark, *LOND. MED. GAZ.*, June 4th, 1847.

Contracted pulmonary orifice. Patency of auricular and ventricular septa and arterial duct.—A cyanosed child, seventeen months old, which died from cerebral

* The specimen is preserved in Guy's Museum.

effusion. Entrance of the *pulmonary artery* small, and provided with only two valves. A free aperture in the base of the septum ventriculorum. The *foramen ovale* and *arterial duct* very nearly closed.—Dr. Peacock, MED. GAZ. Feb. 1848.

Contraction of pulmonary orifice. Auricular and ventricular septa perforated. Arterial duct closed.—In a dissipated man, about 28, Dr. Marcus found the *pulmonary valves* contracted and inefficient. The *tricuspid valve* might be regarded as wanting. Two small openings in the *ventricular septum*. *Foramen ovale* widely open.—Casper's Wochenschrift, 1849, and MED. GAZ. Dec. 1849.

In the case of a cyanosed boy 13 years of age, who died of pneumonia, the aorta arose entirely from the sinus of the right ventricle. The orifice and trunk of the *pulmonary artery* would scarcely give passage to a goose quill. Left ventricle very small, and had no exit except by an aperture of sufficient size to admit the point of the fore-finger, which opened into the right ventricle beneath the origin of the aorta. A small valvular opening in the *fossa ovalis*. State of the *arterial duct* not ascertained.—Mr. N. Ward for Dr. N. Parker, Pathological Society's Report, April, 1847.

Pulmonary orifice narrow, deficient interventricular septum, closure of arterial duct and foramen ovale.—Child, about two years and five months; cyanosis commencing three months after birth. Extreme contraction of *pulmonary orifice*; opening in the *septum ventriculare*; left cavity small; *ductus arteriosus* and *foramen of Botall* closed.—Dr. Peacock, London Pathological Society's Report, Dec. 7th, 1846.

Early tendency to closure of arterial duct.—Fœtus, born at seven months and a half, died in fifteen minutes after birth, in consequence of hæmorrhage from the umbilical cord. *Arterial duct* nearly closed, capable of admitting only the shank of a large pin.—Author, London Pathological Society's Report, 18th January, 1847.

Congenital closure of the aortic orifice probably compensated by an open state of the arterial duct.—A female child, born at the full term of pregnancy. It lived two days, and died in convulsions, having been until their occurrence apparently in good health. The heart was natural in size and normal in situation; the cavities of the right auricle and ventricle were much enlarged. The *pulmonary artery* was in the same condition. All the *carinæ columnæ* on the left side were fused together, so as to obliterate the ventricular cavity, and present in lieu of it a solid mass. The only trace of ventricle was at the upper part of the latter, where there was a little hollow space,

of a rounded form, just capable of holding a small pea, and presenting within, slight traces of *chordæ tendineæ* and mitral valve. The *ostium aortæ* was perfectly closed; and, on opening the ascending portion of the arch, two small folds of the lining membrane indicated the site of the sigmoid valves. The left auricle was natural, the *foramen ovale* large, and the coronary arteries arose at their usual place, and ramified in the usual manner.—E. Canton, Esq., MED. GAZ., March 1849, p. 561. Mr. Canton was so obliging as to afford me an opportunity of carefully examining this valuable specimen of exceedingly rare and curious malformation.

Open ductus arteriosus, associated with contraction of the aorta distal to the left subclavian artery.—Case of this malformation occurring in a male child born at the eighth month, and which died at the age of ten weeks.—Dr. Peacock, LONDON MED. GAZ., Nov. 26th, 1847. Seen.

Case illustrating the earliest stage of the malformation usually known as "distribution of the descending aorta from the pulmonary artery."—Author, Report of Pathological Society of London, 15th March, 1847.

Permanence of arterial duct associated with disease of the aortic valve, and narrowing of the aorta opposite the left subclavian artery.—An interesting example of this malformation, occurring in a woman, æt. 34, is recorded by Dr. B. G. Babington.—Ibid. April 19th, 1847. Seen.

The case of closure of the *foramen ovale* previously to birth, alluded to in the memoir, is related in detail by Ebenezer Smith, Esq.—Ibid. Dec. 7th, 1846, p. 53. This highly important specimen is preserved in the Museum at Guy's. Seen.

Transposition of the pulmonary artery and aorta without transposition of the cavities of the heart. Foramen ovale and ventricular septum open.—This malformation observed in a cyanosed child which died at the age of three years. By M. Colmès.—Archives Générales, vol. v. p. 284, for 1834.

Rupture of pulmonary artery.—An interesting case of extensive rupture of this vessel, with laceration of the left auricle, in which the individual survived the injury nearly four hours, is related by Mr. Prescott Hewett.—LONDON MED. GAZ., May 14th, 1847.]

Condition of the Cavities of the Heart in Cases of Malformation associated with error in the Pulmonary Artery.

Right auricle.—In nearly all instances of congenital cardiac defect this cavity is largely developed, being usually much dilated, sometimes enormously so; and

generally with more or less thickening of its muscular structure. In some cases the pulmonary veins open into this cavity by uniting and forming two orifices; in others, one or two of those vessels terminate here, while one or more communicate with the superior cava: in one instance the whole of the pulmonary veins were found to enter this cavity. The valved, cribriform, and widely patulent states of the foramen ovale, are well known to anatomists. Occasionally the auricular septum presents two orifices quite distinct from each other, and separated by muscular structure. In a case (Dr. Blackmore's) where the tricuspid was unusually imperfect, the orifice of the superior cava was defended by a thin valvular apparatus.

Right ventricle.—The tricuspid valve has been found in various ways malformed, in cases of narrowing of the pulmonary artery. Contraction of the right auriculo-ventricular orifice is a not unfrequent concomitant of aetiation of the pulmonary ostium.* It appears to be a rule that, when the pulmonary orifice becomes obliterated, subsequently to the completion of the ventricular septum, the right ventricle undergoes so much contraction as almost to disappear entirely: hence, evidently, one form of single heart. In the larger proportion of cases of malformation of the pulmonary artery, the right ventricle is remarkably developed. In none of the severer cases that I have seen has it presented the tenuity of the anterior wall, and that external flattening which characterise this ventricle in its normal condition, but its cavity usually assumes more or less of a globular form: and (in the cases of obliteration and severe obstruction of the pulmonary artery) its walls are probably never thinner than those of the left ventricle, and are generally far thicker. In most cases of this description it is mechanically a matter of absolute necessity that the right ventricle should be of large capacity; but it is occasionally so large as to render it apparent that its condition is rather one of hypertrophy and dislocation than of merely unusual dimensions and muscular power. In cases of this description the ventricle rarely becomes attenuated and aneurismal: still, this extreme result has been observed.

Left cavities.—In all cases of obstruction to the pulmonary artery, the size and strength of the left auricle and ventricle are proportioned to the quantity of blood

permeating the lungs. This does not always depend on the manner in which the pulmonary artery is malformed at its orifice: thus, in one case this vessel may be merely contracted, and the lungs receive a very small supply of blood: in another, the ascending pulmonary trunk may be wholly obliterated, and yet the pulmonary circulation may be comparatively freely supplied from aortic branches. In the latter case the left cavities will remain of fair size, perhaps nearly or quite equalling the right; in the former they will be found contracted in dimensions, and of weak muscular power. In fact, without examining either the lungs or the large vessels, the degree of freedom of the pulmonary circulation may generally be at once resolved, in cases of contraction or obliteration of the pulmonary artery with deficient ventricular septum, by observing the size and strength of the left cavities as compared with the right. In some instances, where the aorta has been disturbed directly over the septum, and the left cavities have been well supplied from the lungs, I have found the left ventricle fully as strong and as large as the right, having evidently taken an active part in propelling the blood into the aorta. Still as, in a very large majority of these cases, the supply of blood to the lungs is unnaturally small, and circulates with difficulty, it is usual to find the left auricle and ventricle remarkably small, and with rather thin parietes. Indeed, in many cases, the left ventricle appears to perform no other function than that of propelling a small supply of oxygenised blood through the open septum into the right ventricle, upon which nearly the whole onus of carrying on both the pulmonary and the systemic circulation devolves. Where the orifice of the aorta is obliterated, the ventricular septum being complete, the cavity of the left ventricle becomes nearly obliterated. I believe that, in several forms of congenital disease of the heart, attended with great pulmonary obstruction, death is hastened by the thinned and weakened condition of the left cavities, which have become so atrophied and powerless as to be incapable of contracting firmly upon any unusual quantity of blood that may be accidentally thrown into them.

A review of the examples of congenital heart disease, and of cardiac lesions occurring at late periods of life, which have been collected in the preceding pages, affords us an extraordinary insight into the many and beautiful resources which nature possesses in adapting the still uninjured portions of a diseased or deficient heart to the necessities of the circulation. There are no truths more important in physiology or pathology,

* I believe that great narrowing of the tricuspid orifice rarely, if ever, occurs independently of contraction of other outlets of the heart. I have met with two remarkable instances of this lesion, in each of which the mitral orifice was also extremely narrow. A complication of this kind, of course, gives uncertainty to the diagnosis, and diminishes the prospect of survival.

none which convey to the physical student a more direct and striking evidence of the greatness of the Creator's plan in the construction of man's body, than the facts that life and circulation may continue under either of the following conditions:—When the right auriculo-ventricular orifice, the ascending pulmonary artery, the mitral opening, the aorta ostium, or the descending thoracic aorta, is perfectly obliterated; where the foramen ovale or arterial duct is closed previously to birth; or where, in adult life, the pulmonary valves have become totally destroyed. It is a consciousness of the gift of recognising such beautiful truths as these, and of obtaining, through them, an insight, however partial, into the right means by which nature should be assisted in her efforts to resist disease, that frees the labours of the pathologist from every embarrassment of fear and disgust, and leads him forward in his researches by the power of a resistless and inexhaustible charm.

[To be continued.]

TEST FOR SUGAR.

DR. DONALDSON, U.S., gives the following proportions as the best reagent for the application of Trommer's test in the detection of sugar in the liver, serum, urine, contents of the stomach, and animal secretions generally:—

R Crystallized Carbonate of Soda,
Caustic Potash, aa. ʒj. ʒj.
Bitartrate of Potash, ʒj. ʒij.
Sulphate of Copper crystallized, ʒj.
Distilled Water, Oj. M.

To be boiled and then filtered.

A few drops of this solution added to the suspected urine, or to the decoction of a piece of the liver, or to the serum of the blood, will, on the application of the heat of a spirit-lamp, in a few minutes reveal the presence of a minute proportion of sugar, by the liquid becoming first of a yellowish-green colour, and by degrees more and more of a reddish-yellow colour, in proportion to the amount of sugar contained. This colouration does not take place with any other variety of sugar excepting glucose; but cane sugar is immediately changed into glucose by previously boiling the liquid with a few drops of diluted sulphuric acid. Should organic matter be suspected to be the cause of the reduction, then it is better to precipitate this in the first instance by a solution of acetate of lead; afterwards to filter, and to get rid of the surplus lead by a current of sulphuretted hydrogen gas. The filtered liquid should be boiled before the test is applied, in order to expel any sulphuretted hydrogen gas that may be dissolved in it.

ON THE DEVELOPMENT OF LOOSE CARTILAGINOUS BODIES.

(Read before the Abernethian Society,
Jan. 9th, 1851).

BY J. A. KINGDON, ESQ.

THEORIES in abundance are not wanting to elucidate the mode in which loose cartilaginous bodies are formed, but unhappily, they are so varied and unsatisfactory, that the question must be considered to be nearly as far from solution as when first mooted; not that the opinions advanced are altogether erroneous, but that those which have the greatest show of probability fall short of giving any satisfying explanation of the source of such bodies. Thus, at the dawn of pathology, Haller and others were led, from the paucity of observed facts, to consider them to be formed of pieces of articular cartilage detached by violence. This matter-of-fact doctrine was for a time discarded, when Hunter propounded his theory that they were formed of effused blood, which took on the characteristics of cartilage during its organization; for since several bodies were found in the abdomen and other serous cavities, the first explanation was found inapplicable generally. Since then there have been more conflicting statements; Béclard, Laennec, and Cruveilhier, contending that they had their origin external to the synovial membrane; while Andral and Carswell considered them to be formed in the substance of plastic lymph, or some such exudation, inflammatory or otherwise, poured out from the walls of the cavity in which they existed: detached pieces of exostosis and outgrowths from the edges of the articular cartilages have been described by Sir Benjamin Brodie and others. Now, with the exception of Hunter's, all these views are probably correct, for however contradictory they may at first appear, a more minute investigation will show that they do not in any way clash. That pieces of cartilage have been knocked from the articular surface loose into the synovial cavity is indisputable; but such occurrences are by no means frequent; so also there can be no doubt that nodules of exostosis or cartilage

have occasionally grown from the articular margins, and subsequently been detached; but as such cases carry with them their own explanation, they will have no further consideration in this paper.

It is, however, with those bodies (examples of which are to be found in almost every Museum,) whose nature and structure clearly indicate an origin independent of such causes, and therefore are worthy to be classed as tumours, that we have at present to deal; and although all the bodies that are known under the name of "loose cartilages," whether found in serous or synovial cavities, will be included in the argument, yet such as are found within the articulations will occupy our chief attention, inasmuch as they have received the closest examination.

Some are osseous, some cartilaginous, partially ossified, while others more closely resemble dense fibrous tissue; the two first forms are most generally found in the articular cavities, the latter in serous enclosures. Have these bodies an independent power of growth? To answer this question let us discuss the validity of the assertion—"the animal cell differs from that of the vegetable mainly in not having that independent vitality which the vegetable cell undeniably possesses,"—as that seems to be a stumbling-block in the way to a comprehension of the growth of all animal textures.

A vegetable cell may be said to consist of a structureless membrane, which encloses a fluid and contains a body known as the nucleus. This body is the most important part of the cell, as it is the seat of vitality, and is the acknowledged agent of growth and reproduction: the growth of the cell, which is at the same time its proper function, takes place by the imbibition, through the porous cell wall, of that material for which the nucleus possesses an attraction; in reproduction too, (or rather multiplication,) the nucleus is of equal importance, for whensoever a new cell is formed, a portion of that body is separated by a process called "spontaneous fission," and becomes the nucleus of the infant organism; this process is clearly perceptible in the single-celled *algæ* and fungi. It is asserted by Schleiden, that every plant developed in a higher degree than these single-celled vegeta-

bles is an aggregate of fully individualized, independent, separate beings, namely, the cells themselves; and Hunter's expression, "every part of a vegetable is a whole," forms a good background for Schleiden's opinion. But it is not supposed that conviction will follow these quotations unsupported, else might many more be cited; the power that everyone now has of investigating the minute structure of the organic kingdom by the microscope affords the greatest argument that can be adduced in favour of these views; by it can be observed in the cells of the highly developed plant, an almost exact repetition of those processes which have been mentioned as occurring in the single-celled organism, namely, growth by imbibition, and multiplication by endogenous reproduction, and fission.

Schleiden further remarks, "Each cell leads a double life, an independent one, pertaining to its own development alone; and another incidental, in so far as it has become an integral part of a plant," that is to say, besides its own peculiar vital force, it contributes by the exhibition of that force, (namely the performance of its functions) towards the vitality of the compound organism. It is not essential for our present purpose to consider the laws of vegetable cells further, nor does our argument require a substantiation of what has been already stated; but bearing in mind what is asserted for the vegetable cell, we must see whether the animal cell is governed by other, or the same laws.

An animal cell properly so called, (the agent, for instance, and not the effect of secretion,) consists of an homogeneous, structureless membrane, which encloses a fluid, and contains a nucleus; this nucleus, like that of the vegetable cell, has been considered by Professor Goodsir to be the agent by which nutritive material is attracted through the porous cell wall, and has been called by him a "centre of nutrition:" this view appears to be generally admitted, but the other property of the nucleus, that of reproduction, does not seem to be so universally allowed.

"The single-celled animal, the *Gregarina*," says Professor Owen, "differs from the single-celled plant by the contractility of its tissue, and the solubility of its cell wall in acetic acid;" it grows by imbibition, or endosmosis, through its

investing membrane, and multiplies its species by division of its nucleus, each portion of which so divided becomes surrounded by the contraction of the enclosing tissue between them. This process, which is the counterpart of that which occurs in the single-celled algæ and fungi, takes place also in the polygastric infusoria, and has received the term of "spontaneous fission," or "fissiparation." It is clear, then, that there are some animal cells which resemble those of the vegetable in their behaviour, so to speak; and on what grounds similar conditions should be denied the individual cells of the compound animal, we shall have now to consider, and to determine whether the nucleated cell of the animal does not bear the same relation to the single-celled gregarinæ, as does the cell of the plant to the lowest form of fungus; for it cannot surely be considered preposterous to maintain the individuality of the nucleated cell, even though proof be wanting, when its descent from the impregnated germ-cell is remembered, whose exhaustless influence, as evidenced in the aphides, so far exceeds the reach of finite comprehension.

Cartilage is the tissue with which we are more especially concerned in this paper, and to that alone will our attention be directed, without waiting to discuss the peculiarities of other nucleated cell structures. This tissue is comparatively simple in its structure, being made up entirely of nucleated cells imbedded in a structureless intercellular, or hyaline substance. The cells themselves closely resemble those of the vegetable; their outer cell-walls are clearly defined and homogeneous, their nuclei distinct, and their arrangement such as would indicate fissiparity; for they are found often marked with slight hour glass indentations, with half-formed diaphragms, and still more frequently are two or more of them found lying in juxtaposition with a narrow cleft between them. This notion of fissiparous reproduction is still further supported by the minute investigation of the disease known as "ulceration of cartilage," where the cells, and more especially the nuclei, divide and subdivide so rapidly as to break up the cartilage into a finely molecular condition, similar in appearance to fatty degeneration of other organs: from which we may reasonably infer that this power of reproduction is

quite independent of growth, and seems to be inherited by the nucleus from the primitive germ-cell, which after impregnation so rapidly multiplies its contents without a corresponding increase of its own dimensions. Besides this power of reproduction, the cartilage cell, in common with those of all animals, possesses a power of attracting into its substance material for its development and growth, by which means the structure in which it is situated is maintained; so that it may be said to have the "double life" spoken of by Schleiden as being a characteristic of vegetable cells. How does cartilage grow? According to our argument it should be through the agency of the nuclei attracting nourishment into the hyaline substance, and from thence imbibing it for its own increase: and doubtless this is the case. But in what order are the cells developed, and whence is the material for their increase obtained?

To the first part of this question no definite answer can be given, since all cartilages have not an identical mode of growth. In ossifying cartilage, as a matter of abstract reasoning, it must be evident that as the process consumes fully developed cells, the new material essential for its continuance must be deposited beyond the seat of its action. Now it has been a matter of much dispute whether these new cells are developed at the margin or in the substance of this ossifying cartilage: a little investigation will show that both are synchronous, for in a section of the extremity of one of the long bones during its early and rapid growth can be seen the gradations from the simple, singly-nucleated, minute cells, which are to be found most remote from the part where ossification is proceeding, to the compound group of doubly nucleated and nucleolated cells formed by fissiparation, and still held together, as it were, in bundles by a faint trace of the original cell-wall. This may be observed in almost any part of the advanced foetal skeleton; and in a transverse section of the costal cartilage prior to the development of blood-vessels within it, the marginal cells will be found to be smaller, and to contain fewer nuclei than those situated towards the centre: hence, if it be allowed that the smaller cells are the younger, to which admission it is hard to find a valid objection, we must, to a certain extent, allow cartilage to have

an exogenous mode of formation; for the fact quoted in evidence of an endogenous formation,—namely, the horizontally flattened condition of the more superficial cells, supposed to be produced by pressure from within, in no way militates against the former view, but rather gives it support, by showing that the cells do not arrive at maturity soon after their production, but still go on increasing and multiplying, and thus press against and tend to flatten those more recently developed outside them. There is also good reason to believe that the permanent articular cartilage is formed in a similar manner; but whether, after having arrived at maturity, its farther nutrition is carried on by the formation of new cells, or by the mere renewal of the constitutional atoms of those already existing, is a question still to be decided, although the latter view is certainly the most reasonable. Whence is it nourished? In vascular cartilages the source is evident; but in those that receive no bloodvessels, as the articular, it is not even now decided. It is, however, pretty generally admitted that the exudation of liquor sanguinis is all that is required, as that fluid contains all the essentials for its composition. In the articular cartilage of mammals Mr. Toynbee considers that fluid to permeate the entire thickness of the cartilage, and even a thin layer of bone, and to be drawn from the convoluted capillaries in the ends of the bone; while Dr. Leidy, in the *American Journal of Medical Science*, states his opinion that it is nourished by imbibition of synovia, a fluid especially rich in albumen, which he states to be the essential constituent of the tissue of cartilage. This latter opinion was suggested by Henle, and does not seem to be amenable to any grave objections, since the synovial fluid differs from the liquor sanguinis principally in being more rich in albumen; at the same time that it contains similar ingredients: it may, however, be taken as certain that true blood is not requisite for the ordinary exigencies of cartilage.

We have now theoretically a right to the following conclusions,—that cartilage by virtue of its nucleated cell structure has an independent vitality, so long as nutriment is within reach; that that food is to be found in the liquor sanguinis, and in the synovial

fluid; and hence, that attachment is not essential for its maintenance.

Lest any one should be led to build up an absurdity from these observations, and infer that such a substance placed under favourable circumstances, even out of the body, ought to go on growing to eternity, it must be stated that no greater power is ascribed to cartilage than is acknowledged to be possessed by the monad or any other part of the organic kingdom, but, that in common with them, it has its stages of development, maturity, and decay; for, by the laws of all organised matter, exhaustion is an essential concomitant of vital independence.

We must now turn to the practical bearing of these conclusions on the bodies whose nature we are discussing, and see how far their structure supports the speculations the obscurity of their origin has given rise to. They are common; for there is scarcely a pathological museum that does not possess specimens of cartilaginous bodies found in joints, either swinging freely in the cavity by a slender pedicle, and covered by synovial membrane; or, as often, perfectly unattached: they have no definite shape, those found in the larger cavities, such as the peritoneal, are for the most part of a round or oval figure, while those subject to pressure, as in the knee or other joints, have oftentimes a more or less flattened form: those found in joints moreover have generally an irregular or nodulated surface, while those of serous cavities are more smooth in their outline. As has been before stated, these bodies vary in density; sometimes, particularly in aged people, they are totally ossified, at others they have a cartilaginous coating. Among a cluster of them, whose average size was that of a walnut, found loose in the hip-joint of an old person, not one of them had any trace of recent cartilage. In a section of one, spots of softening were found scattered through its substance, and there the structure was converted into a cretaceous paste; there was no appearance of concentrically arranged lamellæ, nor to the naked eye was any definite structure visible; a transparent section, however, by the aid of the microscope clearly showed that the calcareous matter had been deposited in a cartilaginous basis, although there was not much uniformity of structure; for in parts the configura-

tion of cells, (large, and mostly round,) irregularly scattered through a densely granulous bed, was clearly traceable; some stood alone, some in groups; they contained one, two, or more calcareous nuclei, and such as were translucent presented under certain focal conditions a radiating refraction. In some, the nuclei were distinctly stellate, while others were so choked with earthy deposit as to present no other indication of the position of the nucleus than a maximum of opacity: branched bone corpuscles were found assembled in various parts, without any trace of surrounding cells.

In another case, where two loose bodies were removed by operation from the knee of a middle-aged man, a section of the largest, which was nearly the size of a bantam's egg, presented an appearance of concentric formation; the centre was soft and had a gelatinous aspect, and around it was compact osseous matter, marked in close circling lines by an alternation of its density; the whole was surrounded by a thin layer of elastic unossified cartilage. Under the microscope the cartilage cells were found to be assembled in linear groups, and seemed as though strung together; each cluster was enclosed in a dark indistinct envelope, which was visible only when the cells themselves were out of focus: these groups were parallel to one another and to the circumference of the mass: the cells themselves were of various sizes and shapes, and where their walls approximated one another they were flattened; they contained one, two, or more nuclei, and occasionally distinct nucleoli: the nuclei themselves had, for the most part, an irregular, nodulated outline, and refracted light brightly but in many points: the basis substance was finely granulous, and contained earthy accumulation in various parts. Ossification seemed to take place by the deposition of earthy particles within the outer cell wall chiefly. A transparent section of the ossified portion showed true bone-corpuscles having a concentric arrangement,—not however around tubes, as in healthy bone, but regularly around one common centre: they were more closely crowded in some places than others, and thereby gave a ringed appearance to the naked eye. Although dissimilar in structure, these were undeniably samples of true cartilage, the first having its type in abnor-

mal cartilaginous productions, such as enchondroma, &c., the latter more nearly resembling natural ossifying cartilage: in neither was there any trace of vessels of any kind; nor had either any neck, or positive mark of previous attachment. But let us suppose that they had, and let us, with Cruveilhier, believe that they were first formed outside the synovial membrane; how will this further our knowledge of their growth?

That they can arrive at a considerable size without blood-vessels must surely be granted, since many forms of normal cartilage are acknowledged to be devoid of them, and the examination of the foregoing samples shows that some at least present no trace of their existence: hence if there be no source of nutriment within, the material for increase must be obtained from without, and so the growth be carried on by external addition,—a view strongly supported by the structure of the second specimen: in which case, so long as the body remains in the tissues surrounding the joint, its nourishment must be obtained from them, or their vessels; but, as soon as it is protruded within the cavity, it must either cease to grow, or acquire substance from some other source. Now if, as Dr. Leidy asserts, the synovial fluid does contain all the constituents of cartilage, which is more than probable, there can be no hindrance to the continued growth of the body so displaced. It may, however, be objected, that the synovia does not contain earthy matter in quantity proportionate with the amount found in these bodies, and if rapidity of growth were asserted, (a point denied by the comparative thinness of the cartilaginous coating in the second specimen) the objection would hold good, but phosphates of lime and magnesia exist in the synovial as well as in all the serous fluids, and the irritation a foreign body would cause in the cavity of a joint would doubtless occasion an increase in the secretion. If this be so, it becomes manifest that the attachment of the bodies to the walls of the cavities in which they lie can have nothing to do with their growth or production, but that they merely prove them to have originated exterior to the lining membrane, in which case they can differ in no especial degree from the loose unattached ones found in similar cavities; and what is argued

for the one must be equally applicable to the other.

Whether found in the sheaths of tendons, in joints, or in serous cavities, whether fibro-cartilaginous or cartilage, all the substances known as loose cartilages are included in these arguments, since they originate in nucleated cell structures; for if our reasoning be substantial, all that is required is a separation of a nucleus, or germ, and its deposition within reach of food; but how this separation takes place is at present difficult of solution. Cruveilhier imagined the gelatiniform cysts, that he occasionally found in the neighbourhood of joints, to be the source of these formations; and the view has some show of reason, inasmuch as the "chorda dorsalis" or "notochord" is in like manner a transparent gelatinous mass prior to the development of cartilage within it. Andral, and Carswell also, without denying that they are occasionally so produced, incline to the belief that their matrix is thrown out from the walls of the cavity in which they are found, in the shape of plastic lymph or some such exudation. But however probable these conjectures may be, no satisfactory conclusion can be obtained until these cysts have been subjected to rigid microscopic examination.

Note.—Since the foregoing was read to the Society, the writer has become acquainted with Rokitansky's* explanation of the manner in which cysts are formed; namely, by the enlargement of some cell, nucleus, or germ, which takes on an independent sphere of action,—deviates from its prescribed law: this is no mere speculation, but has been practically demonstrated, and bears strongly upon the views inculcated above; for add fission to this power of increase, and a tumour results. The remarks of Mr. Paget† strongly confirm this:—"Important as the history of cysts may be in its direct bearing, yet these are not all that we may observe in it. In their history I cannot but think we may discern an image of the first form and early progress of many innocent solid tumours also. For as the cyst is traced from the mere nucleus, or even from the granule, onward to its extreme size or complexity of structure or contents,

so it is very probable from the numerous correspondences between them that these solid tumours also have a similar beginning in some detached element, a tissue germ, or in some group of such germs, which in their development and growth may coalesce, and then may appropriate, or exclude for absorption the intervening substance."

CONTRIBUTIONS TO MEDICINE.

THE STATISTICS OF CLIMATE AND DISEASE;

WITH REMARKS ON THE DURATION OF LIFE
AND PREVAILING DISEASES OF OUR
COLONIAL POSSESSIONS, AS COMPARED
WITH THOSE OF EUROPE, ASIA,
AFRICA, AND AMERICA.

By JAMES BOWEN THOMPSON, A.B., M.D.

[Continued from last volume, page 947].

No. VII.

ON THE LEPROSY OF THE EAST, AND SOME
REMARKS THEREON (continued).

SINCE writing the paper that appeared in the MEDICAL GAZETTE of the 30th of May last, I have had the pleasure of meeting Dr. Adair Crawford, who has travelled in the East, and who visited the asylums in Damascus, and saw on that occasion some of the cases whose history I now annex to this paper. It is gratifying to myself to find that he fully concurs with me in the views I have taken of the disease, its progress, and general treatment; and, chiefly at his request, I have undertaken to enter on this occasion more fully into the primary causes and progress, and supposed contagious property, of the disease of leprosy. From all the inquiries I made—and they extended over a period of some five years, while residing in Damascus—I was never, in any one instance, able to trace the spread of the disease of leprosy to contagion. From the priests of the different Christian denominations I had frequent statements on the subject, and in which they admitted that they had, on all occasions, made no distinction between a leper patient and any other patients; and, on occasions when leper patients are dying, they (the priests) are, in virtue of their sacerdotal duties, obliged to be in close contact with the dying lepers, inhale their offensive breath, re-

* Ueber die Cyste, 1849.

† Lectures on Tumours, at Royal College of Surgeons, MEDICAL GAZETTE, p. 990, vol. xlvii.

main in their apartment; touch and dress their sores, and do many other needful duties for these poor creatures; and, notwithstanding all this, and their peculiar exposure to the influence of contagion—if such there be—they one and all assert that they never heard or knew of a priest contracting the disease of leprosy in any form: even tradition does not speak of any such occurrence. The Orientals, generally, look upon holy men—among whom they include doctors—to be exempt from a contagious influence, even where, under ordinary circumstances, it is known and admitted that others are liable to contract the disease. The Jewish Rabbis and Moslem Ulama are likewise exempt, they being priests of their respective sects.

In regard to the infectious nature of leprosy, I have reason to know that a modified form of the disease can be generated by subjecting a delicate or strumous patient to the influence of the matter taken from a leprous sore, such as inoculating the patient. In this case there are instances where modified forms of the disease have been produced; and I make no doubt but that if these same patients were living for any time in the same rooms, and breathing the same atmosphere as that of leper patients, the disease would present itself, and be thus acquired and communicated from one to another. The disease, in these latter cases, is very slow in its progress: the state of the health of the party has a great influence on its appearance: it may remain for months in the system, and the premonitory indications of the pustules not appear. These latter also vary in every case, and even in different parts of the person. When on the body or extremities, the nature and character of the pain, the appearance of the open sore or ulcer, and the discharge, likewise differ, as do the causes of the disease, whether acquired or hereditary; so, in like ratio, will the other characteristics of this disease vary. As already stated in my former paper, I am of opinion that there is a close affinity between the disease of leprosy and struma, and syphilis, and that the introduction of this latter disease has very greatly aggravated the two former whenever and wherever they are complicated. In pure cases of leprosy I should not be apprehensive for the final and successful treatment of the disease,

with due regard to diet, air, cleanliness, the bath, the free use of mineral acids—the dulcamara,—and what I had frequent recourse to—namely, a combination of the compound decoction of sarsaparilla and the liquor taraxaci,—say about two parts of the former to one of the latter,—and the patient to take half a pint of this in the forty-eight hours. The free use of camel's milk may possess some peculiar virtues in the estimation of a Bedouin, and I make no doubt does, and may be beneficial. The quality of the milk is influenced by the herbs and shrubs these animals feed upon; but the remedy is not one likely to be generally available, and the flavour of the milk is only palatable to a child of the desert; his faith in its many other virtues may of itself produce a happy effect on his spirits, and thus react on the bodily ills. Leprosy was looked upon in the East as a polluting disease; it rendered a man unfit for the ordinary duties of life; and leper patients are not allowed to enter the temples of worship of any sect, nor to associate with their fellows: and even in Scripture we are told that any one who touched a leper became unclean himself. In the present day the bad cases of leprosy are not allowed to go at large, they are obliged to keep within the precincts of the asylums; but the milder cases, and those who are not objects of disgust, or show traces of the disease, are allowed to go at large and to collect alms for their fellow-sufferers in the hospitals. The people hand these lepers money, bread, &c., and, so far, do not evince any fear of the disease, though Orientals are naturally very fearful and timid about any sickness where contagion is apprehended: though the Moslems are fatalists, still they observe a wise precaution at all times, and are not foolhardy in seasons of epidemia, plague, or cholera. Leprosy is recorded in Scripture as being a spreading disorder; it covered a man with white scales from the crown of the head to the sole of the foot. It is a most painful disease; the hands and feet are known to be eaten away, and in this state the poor leper is quite crippled, and drags out a miserable existence.

The leprosy of Scripture was considered incurable. We are told that, when the king of Syria in former times asked the king of Israel to cure Naaman

his captain, the terrified monarch rent his clothes, saying—"Am I God, to kill and make alive, that this man doth send unto me to cure a man of his leprosy?" In the following cases will be found some interesting facts as regards the disease in both sexes, and its influence on the offspring when only one parent was diseased:—

Cases 1, 2, 3, 4, 5, and 6.—Of this number of cases there were three Mohammedans and three Christians, the latter of the Greek Church. One of the worst cases in the Moslem Asylum was that first on the list, and marked No. 1. The others varied in their character, but each possessed some peculiar features worthy of notice, and from which useful and practical information may it is hoped be derived,—at least interesting to the medical inquirer, and particularly so, I presume, to those practitioners who have rarely an opportunity of seeing the disease in a like form in this country.

Case No. 1.—Mohammad Hassam, æt. 28, from C. Kadass, in Sufut, was married, in 1842, in the Asylum, to the woman whose history follows the details of his own case, and marked No. 2. In the year 1834, this man was reaping corn in the fields in his native village, when a man then present, looking closely at him, pronounced him unclean. At that time his whole body was quite well, with the exception of his face, which looked rather bluish. The people, on hearing what had passed, at once declared that he must leave the village, or bring a certificate from a medical man that he was not afflicted with the disease of leprosy. There being no refuge or asylum for him elsewhere, he was obliged to come to Damascus, where he has been ever since; and, in his relation of his case, he said he had no recollection of hearing or seeing any other member of his own family being affected with the disease. The disease assumed in this case a very aggravated form, and the sores were very painful, the ulcerated surfaces hard and irregular, and deep, with scaly incrustations, especially on the forearms; the voice was scarcely audible, and the disease made progress in the soft palate, and the cartilages of the nose were apparently diseased, and the circulation very feeble, and a livid hue over the mouth and fauces; the fingers and

toes became affected, and one of each foot nearly destroyed.

The disease seemed to have made greater progress for the last two years than in the previous six years; and none of the native remedies appeared to have had any effect. These remedies consisted chiefly of poultices of different herbs, preparations of lime, and gypsum: the internal remedies were tonics—chiefly bark and sarsaparilla. In this man's case there was a very peculiar roughness about the skin, which I have not noticed in any of the other cases. The bulbs of the hair on all parts of the body appeared diseased, and dropped away; and the skin then assumed a shining or bright colour, and felt indurated to the touch, as if some amount of inflammation had existed in the part, and that there was an extravasation of coagulable lymph. This hardness does not appear to yield to any local remedy, neither does it appear influenced by constitutional treatment. It is not in general noticed, unless in very bad cases, and in old persons, in whom there is very little hope of doing much good, unless by palliating urgent and painful symptoms as they arise. It was only in the last year that this man lost his voice. In adult life the disease very soon affects the voice, and increases in proportion as the person advances in life. Young persons do not lose their voice so soon. It appears that these parts retain their powers of resistance to a remoter period or stage of the disease than other parts or other tissues. The appearance of the parts destroyed by the disease, especially the cartilages of the nose, &c., present a somewhat peculiar appearance in advanced life, and seem to be removed more by a process of absorption than by ulceration. Leprosy does not render its subjects less prone to other diseases, as is supposed by some; leper patients are just as liable to prevailing sickness as any other people. In this respect there is no preservative property, apparently, in leprosy, though an old impression exists to this effect. In most cases there is considerable constitutional disturbance at first, and the stomach and liver chiefly appear engaged, and the bowels very irregular—either too relaxed or the reverse. The head is also very much engaged; pains in the loins, secretions generally deranged, and the water high-coloured or limpid, and profuse or

scanty. These symptoms generally precede the attack; then follow the appearances of the skin, and an altered expression of the face, a sense of pricking or prickling heat about the soles of the feet and the palms of the hands, a watery eye, and not unfrequently a cough ushers in the first appearance of the bright spot or pustule, and ceases as soon as this latter is fully matured, and when there can no longer be any doubt about the disease.

This man got married in the Asylum to obtain the mutual aid of a helpmate, in case he might be so far invalidated as to be disabled from attending to himself; and also, for the purpose of rendering his aid in return to his better half. In the Moslem Asylum this is allowed, and thus the lepers—male and female—generally make their selections after they enter the hospital; and there is no need for other attendants, as far as the sexes are equal in number.

No. 2.—Hamdah, ætat. 35, married to the above man, was from the village of Orgau, in Jebel Ajaloon, beyond the Hourane. She was married to a former husband, by whom she had five children before the disease made its appearance. She was married at the age of twelve years. Her former husband was still living; her eldest child was a girl, and the four others boys, all of whom were with their father in his village, with the exception of the youngest, now six years old, who was with her in the Asylum, and quite healthy; though it was while carrying him she showed symptoms of the disease, and was pronounced unclean, and had to leave her home for the Asylum, when her husband, as is usual with Moslems, divorced her. So do the Jews: it does not require any lengthened law process in the East as in this country, and it is not considered a hardship, for the wives can claim a like privilege if the disease appears in their husbands: indeed, it would be deemed reprehensible not to separate after this Divine indication, as it is regarded. None of this woman's children had shown any appearance of the disease up to the last year. She was first affected by the disease some thirteen years ago; it commenced with pains in the bones, especially the knees and arms, then the hands and feet, and lastly, the nose. Then the people of the village met, and declared she could no longer be

allowed to remain. So her husband brought her to Damascus about five years ago. She was then nursing the little boy she had with her in the Asylum. She was divorced *à la Turque*. For some time she suffered from severe pains at night, and a burning sensation in her feet and hands, and mostly all over her body, even in her tongue and mouth. The pain at first was accompanied with a degree of redness, œdema, and a roughness of the skin to the feel at the part affected, somewhat circumscribed. She began to lose her voice about one year before this report was made, in 1844. The children, up to last year (1850), had in no instance evinced any indications of the disease; and it will be interesting to ascertain if they all escape the malady. The child in the Asylum is in some danger I apprehend, though probably in itself as yet healthy, and not infected from its parent; still, unless its diet, and air, and general health, be attended to, I should not be over sanguine as to its escape from such an atmosphere as that in which it exists. It is interesting to know that a woman can give birth to a healthy child, though she herself suffers from a formidable disease while pregnant, and, what is more, suckles this same child. Uterogestation did in this case, I make no doubt, retard the appearance of the more marked characters of the disease; and, as in the cases of phthisis which we sometimes see and hear of, the disease appears for the time being lulled or completely suspended, and only remains in abeyance till after this change from utero-gestation to parturition takes place. Then the disease assumes a redoubled power, as it were, and in many cases runs a fatal course as regards phthisis, and develops itself more fully, as regards cases of leprosy. It is rather remarkable that none of the people of Damascus itself are affected with leprosy; those chiefly in the asylums are from the surrounding country east and south, and from the borders of the Hourane, and Palestine and Egypt. There is little or no leprosy amongst the Jews of Syria; but a great deal of it prevails amongst those of Palestine, from the villages about the Jordan, and as far as Hebron and Gaza. The ancient rivers of Damascus—the Abana and Pharphar—still retain their character for their valuable healing and medicinal powers in all diseases, especially

those of the skin. The pilgrims to and from the fair of Abila (now the plain of Zebdani, just half way between Damascus and the ruins of Baalbeck) bathed in these waters and returned home *whole*. In the present day even, pilgrims—Moslems and Gentiles on their way to Jerusalem and Mecca—enjoy the benefit of these waters, and spend days on their banks in tents, and express themselves relieved and benefited by their ablutions; they on these occasions pay a visit to the tomb—or at least what is by tradition stated to be the last resting-place—of Abel, and near to the spot which is pointed out as that where Cain slew him. It is likewise recorded and believed by Orientals that Adam was made of the red earth of Damascus,—the plain El Ghoulta, in which it stands, being Paradise.

The next case, No. 3, was that of a man, aged 45, a Moslem, married ten years, and having three children, the youngest two years of age, in none of whom were there any traces or indications of the disease at the time of the report. He was divorced from his wife—an Abyssinian—soon after the disease made its appearance, about nine months previous. It is worthy of remark that this woman was free from the disease; and wherever lepers are married to wives or concubines, whether Nubian, Abyssinian, or Circassian, these latter appear to resist the disease; and though they may have lived for years with their masters or husbands, and borne several children to them, whether as wives or concubines, they themselves escape the disease. It is right to state, probably so as to make myself intelligible, that Moslems first cohabit with their slaves, and, in case they like them, they then marry them, and they are ever after treated as such, and no distinction is made between them and their other wives, and no jealousy is created thereby. I have known several instances of this kind, and it is rare to find the disease in any form amongst these females; and the children, the offspring of these marriages, are generally free from the disease, and are remarkably handsome, especially the children of Circassian mothers. The Moslem fathers take a great pride in them, and call them Frangees, for they resemble the children of European parents more than those of Orientals. They are very fair and

comely; the boys manly, and the daughters all grace and beauty.

This man complained of much weakness and general debility at first. He was rather oppressed, especially on making any exertion; and for the first few months, as the disease was appearing, he was not able to undergo any considerable fatigue as formerly. He was a farm labourer. A good deal of stomach complaint precedes and accompanies the disease of leprosy, and the bowels are very irregular. It was so in this man's case; and the eruption made its appearance first on the forehead, next on the face, and then in a few weeks gradually extended to the hands, feet, and thighs, and next all over the chest. The abdomen is seldom affected till an advanced stage, and in persons over fifty years of age, or where the disease has made its appearance late in life, as in this case, when, I make no doubt, it will soon show itself. The general health in these cases suffers for a long time before the disease is at all anticipated. In younger persons there is not so much constitutional disturbance, and the disease is very soon discerned,—probably in from one to three months before it shows itself on the patient's person.

No. 4.—Mariam Shaha, æt. 25, unmarried, a Greek Catholic, from the Hourane, some thirty miles distant from Damascus. Had been in good health till the year 1836, after which time she complained of very much the same symptoms as the last patient, but still attended her usual occupation as a servant in drawing water and tending the flocks. She was a good deal exposed to the weather, and felt the heat latterly more oppressive and relaxing than in former years. She had been generally regular at her monthly periods, but very irregular since her indisposition commenced, and after the disease appeared she became yet more so. The quantity and quality of the monthly appearances much changed, with much pain in the back and loins, and shooting pains down the thighs; she coughed much, and her bowels were generally relaxed; the water scanty and high-coloured. The disease first showed itself in its usual form, the eruptive spots varying in colour from a livid to a yellow tinge, and especially on the face and hands. There was much depression of spirits, and loss of physical strength.

The disease made very great progress in this case in a few months. She said she did not think any of her friends ever had the disease before her, and she cannot account how she got it. She was always healthy, and lived chiefly in the country. She had to leave her village and come to Damascus, where she had been for more than three years, in 1844. She had not lost her voice then, but her expression of face was quite altered, and the disagreeable colour of the skin, which assumed a dirty clay and yellow hue. The spots were becoming larger, the sores spreading and gradually confluent, jagged, irregular in size and shape, deep, irritable-looking, and the edges slightly elevated, and the bulbs of the hair diseased wherever the sores appeared. These sores in old persons very soon assume a tubercular form, but are less sensible to the touch or to change of temperature, and more oleaginous in character.

In this case the appetite was improved, and the general health much better, since she commenced taking alteratives and tonics; and there was much hope for the healing of the sores and benefiting her by a prolonged use of these means, from the decided change that a few weeks had effected already.

No. V.—A boy from a village adjoining that of the Case No. 4, whose age was 9, and who had had the disease in a very mild form for two months before this report was made, in July 1844. His mother was diseased, and divorced from his father, and they had to leave their village and come to the asylum. The mother has had three other children, in two of whom the disease had not appeared, though they are older than this boy. She showed the disease so recently, that it is possible the others may yet do so also. The mother only showed the disease about two years ago: her age is 39, and the leprosy appeared to be hereditary in her family, and of a very bad form. They were Moslems; and all her friends afflicted with the disease went to Mecca, hoping that the prophet would cure them of it; but it was too obstinate for his skill: they all lived to a long period; one reached the age of 75, though the disease showed itself at 35. The lungs did not suffer in any of these cases, and they were carried off more from general debility and old age than by the disease itself. Where the lungs are good, and there is no other ra-

dical malady, the disease does not appear to curtail life by many years. In tubercular cases, the parts first affected appear to be the nose, face, arms, legs, and body: the face is swollen, and of a deep brown or livid hue; the lips puffed and thickened, and oily or rather greasy in appearance; the alæ nasi are enlarged and expanded; so are the ears; and all the cartilages soon become diseased and altered—thick, puffy, and tuberculous. These tubercles disappear, and again reappear, and are not easily influenced by local or general treatment: they may, and do frequently, especially in old people, remain indolent, and cause little inconvenience for years, when, from some cause, they become troublesome, and ulceration ensues, which is sometimes ushered in by much fever; at other times, not much increase of pain or fever precedes the ulceration. These ulcers are scabbed over in a few weeks, and some heal up.

The disease in this boy appeared on the lips and cheek, and did not cause much constitutional disturbance; and the treatment adopted was chiefly attention to diet, air, and cleanliness, and alteratives, and a separation from diseased persons; a distinct apartment; an upper and an airy room; simple dressings to the sores or pustules, and solutions of caustic occasionally applied with a camel-hair brush to the diseased skin.

No. VI.—Ahmad Hassan, ætat. 27, a strong, robust young man, of a strumous habit: contracted the disease, he says, by sleeping with a leper woman before she was pronounced unclean; a Moslem; had been in the asylum for six months in 1845; previously able to work, and a shepherd by trade; always out, and in the open air; was very ill for a few months before the disease made its appearance: it first shewed itself on the elbow-joint and on the forearm, then extended to the face and lips, and, when I saw him, had affected his voice. The fauces looked glossy, relaxed, and diseased; the lips puffy; breath offensive, and mucous discharges from lungs unhealthy; very restless at night; had frightful dreams; bowels irregular: he said none of his family ever had the disease: he had lived all his life in a very healthy village near the ancient city of Bosta, in the Hourane. There were cases of leprosy from that part of the country in the asylum,—some who had acquired

the disease, and others in whom it was hereditary. He never had intercourse with any other female before or since, and he only cohabited with this woman for a few weeks: he does not believe she knew herself at the time that she was diseased, though she knew her family were leprous. Since then he has ascertained that this woman is supposed to have communicated the disease to another young man in a similar way; but this is only supposition and surmise, and I would not attach much importance to such reports. Orientals are very apt to exaggerate in such cases as this, and there is not much faith to be placed in such vague assertions or suppositions.

It may be worthy of notice that females with incipient leprosy are said to be more anxious for sexual intercourse than at any other time; whereas males under similar circumstances are quite the other way—low and depressed, and incapable of sexual intercourse, or at least indisposed to coition. The native doctors are aware of this, and this indisposition is inquired after wherever there is any apprehension of the disease of leprosy being about to make its appearance. It may be a subject of interest to inquire if this be so, and on what grounds does it exist. That it is so, I have no doubt; but why it is so I am not prepared to say. It is possible that Oriental females may be under the impression, that by their having sexual intercourse with men, while they are apprehensive for the disease of leprosy in their own persons, they flatter themselves they may thus avoid the disease, and, if not pass it over to their *friends*, they may at least hope to escape it themselves. It is well known that in Europe females have been known to get young boys to cohabit with them for the purpose of avoiding, as they think, an attack of gonorrhœa.

[To be continued.]

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 28th August, 1851:—Maurice Thomas West, Tenby, Pembroke-shire, S. W.—John Billenwell Gibson, Exmouth Street.

CASE OF PUERPERAL PHLEBITIS, OR PURULENT INFECTION OF THE BLOOD—RECOVERY.

Occurring in the practice of J. Cunningham, Esq., Surgeon, of Hoo; and visited by Drs. John and Fredk. Brown, of Strood, Rochester.

REPORTED BY DR. FREDK. J. BROWN.

MR. CUNNINGHAM, who attended Mrs. S. in her confinement, relates that Sarah S., aged 35 years, the wife of a butcher residing at Hoo, near Rochester, was confined of a female infant, the second child, at 4½ P.M. on the 12th October, 1850. The labour was natural, and of six hours' duration. The placenta was removed from the vagina, where it was lying detached, after an hour and a half.

The patient progressed favourably until the third day, when she was seized with rigors. Mr. C. was called up at 4 A.M. Oct. 15th, and found her under pyrexia, and complaining of headache and nausea, with pains in the uterine region. The pulse was full and quick, and the bowels were confined. Twenty ounces of blood were taken from the arm, and calomel and hyoscyamus exhibited, followed by castor oil. In the evening, as the bowels had acted but once, a mixture of Epsom salts and tartar emetic was prescribed (one dose every four hours).

On the 16th, it was stated that she had passed a restless night, but had had some sleep towards morning. The bowels had operated several times. Redness, with diffused swelling of the *right* arm, of an erysipelatous character, now appeared. She was ordered a mixture of nitrate of potash, acetate of ammonia, and spiritus ætheris nitrici; also Dover's powder and hyd. c. cretâ, (one dose of mixture and one powder every four hours).

There was no change till the 18th, when there was severe pain in the left hip, extending to the knee. The pulse was quick and small, and the febrile symptoms were urgent. Six leeches were applied to each groin, and sinapisms were twice placed over the hypogastric region.

On the 19th wine was ordered, and the medicines were continued.

On the 20th the patient was seen by Drs. John and Fredk. Brown, together with Mr. Cunningham. Her condition was as follows:—countenance dingy and waxy; pulse frequent and small; tongue slightly furred; extreme debility; general tumidity of abdomen; no pain whatever; no tenderness over the uterine region, or in the groin or thighs, and none over the situation of the liver or the peritoneal surface generally; bowels confined and urine scanty; the lochia and the milk diminished in amount, but not suppressed; lochial discharge not offensive; no redness of the skin in any part of the body. Powders of calomel and jalap were ordered (one immediately, and another in the evening). Disulphate of quina in pills (one grain in each), was to be given every four hours; and a mixture of carbonate of ammonia (3ss.) and sulphuric ether (3j.) was prescribed (one dose every three hours). The diet was to consist of beef tea, with a glass of wine every four hours.

On the 21st there was free purging.

On the 25th the report states:—Tumidity of abdomen has disappeared; the bowels have been freely acted on during the last four or five days; urine free; pulse 100, small; tongue clean; countenance continues waxy, with a yellowish tinge. The lochia and milk continue as previously, and the child sucks occasionally. The patient feels better in every respect. Two cathartic powders were ordered to be given, as on the 20th. The mixture and pills to be continued, also the beef-tea and wine.

On the 27th two cathartic powders were administered.

On the 28th she became much worse.

The report for the 29th states:—Palpitations came on last night, and continue. There is flapping of the heart, like the beating up of eggs, resembling the sound produced by the presence of air in the cavities of the heart, as heard in a dog after the injection of air into the jugular vein. The pulse is rapid and indistinct. The bowels are freely open, and there is no complaint of pain. The countenance is as last described, with an expression of anxiety. The quinine pills were ordered to be doubled in strength (one to be given every two hours). Half an ounce of the potassio-tartrate of iron was to be added to the mixture, and to be repeated with each bottle of it.

Next day the action of the heart was quiet; pulse 112; tongue clean. The bursa over the patella of the *left* knee was found prominent, reddened, and fluctuating on manipulation. A cathartic powder was administered. The medicines and diet as before.

On the 31st there was erysipelatous redness, with vesication and swelling of the *left* hip and thigh. The ankle of the same limb was painful, and enlarged by puffy swelling. Pulse 108; bowels open once, scantily. A cathartic powder was given. Medicines and diet as before. Flour to be dusted over the hip and thigh.

On the 1st November the erysipelatous inflammation was found to have invaded the integuments over the whole of the hip and buttock. The subjacent areolar tissue appeared to be unaffected. The bursal swelling over the patella was redder and more prominent than before. Swelling, with fluctuation, was discovered in the *right* leg betwixt the bones, and situated beneath the fascia. Pulse 104; tongue clean; bowels once open. A cathartic powder was given. The medicines as before. The port-wine to be given freely, for the patient has taken but little during the last few days, though she has swallowed her medicine with the utmost regularity, and has taken a considerable quantity of beef-tea daily.

On the 2d an incision was made into the fluctuating swelling in the right leg, when pus and venous clots were evacuated from beneath the fascia. The matter was not bounded, but was lying loose between the muscles. The erysipelatous inflammation of the *left* hip was declining. Pulse 88; tongue clean; bowels opened ten or twelve times by the powder; skin perspiring. A cathartic powder to be given. Medicines and diet as before.

On the 3d the report states:—Palpitations commenced the preceding evening, and continued till 11 A.M.; countenance sunken. The quinine pills and the mixture were ordered to be given much less frequently than before. Beef-tea, wine, and brandy, were to be given at short intervals.

On the 4th the countenance was fuller and better in appearance. The patient passed a good night. Pulse 94, loose; tongue continues clean; skin perspiring, though not profusely. Hardness and redness appeared over the

lower and outer part of the *right* arm (the one primarily affected) in the night. An incision was made into it, and pus evacuated. No clots escaped.

On the 7th the report states:—The incisions, both in the leg and arm, have healed, and the parts have resumed their natural appearance, except that the leg is flaccid and wasted.

The bursal swelling over the left patella has disappeared; it is not known when. A cathartic powder to be given to-day, and another to-morrow. The quinine pills and the mixture of ammonia, iron, and ether, to be given with more frequency than by the last orders.

On the 9th the countenance was more than usually waxy. Palpitations commenced on the preceding afternoon at 4 o'clock, and lasted till after midnight. Pulse 94, small; tongue clean; bowels open; urine passed, as usual, in tolerable quantity, without sediment; thirst. A fresh accumulation of matter has taken place in the *right* leg, between the muscles. The cicatrix was opened, and a tent introduced after the discharge of pus and clots. The calf and lower part of the leg were supported by long spiral straps. There was severe pain in a circumscribed spot to the inner side of the tubercle of the tibia of the *left* leg, with inflammatory thickening of the periosteum. An incision was carried through the part, and a poultice applied. Medicines and diet as before.

The patient suffered severe pain during the next two days and nights.

On the 11th an incision was carried through the periosteum, which was followed by blood only. The ankle and leg were swollen and puffy, and occasionally painful; pulse 124; bowels open. The catamenia occurred this day.

Next day she was easier. Pulse 90. The pain in the leg returned in the evening, and she had palpitations for ten minutes, but she passed a fair night; and on the morning of the 13th the palpitations appeared for only five minutes. Pulse 104, regular, and moderately firm; tongue clean; bowels open; urine free. The periosteal swelling was red, and excessively tender; the leg below this point was glossy and loosely swelled, and presented a yellowish-red appearance about the ankle. Two deep incisions were made through the inflamed periosteum. Blood only escaped.

Gasping was induced by the pain of the incisions, and the patient appeared to be in the agonies of death for two or three minutes. Poultices were applied. Medicines and diet as before.

Palpitations occurred in the evening, and continued all night. An anodyne draught, and the application of five leeches over the head of the tibia, afforded one hour's relief.

On the 15th, a lotion consisting of sulphate of zinc, alum, acetate of lead, and opium, was applied, warm, to the whole leg, which was hard, much swelled and glossy, and resembling phlegmasia dolens. The circumscribed spot over the tibia was still red and tender. Pulse 124, wiry; bowels open. Sleep prevented by the severity of the pain.

On the 16th the leg was easier, and the patient slept most of the preceding night, notwithstanding the presence of palpitations, which were, however, of a slight character, and unlike those previously experienced. Inflammatory redness and swelling appeared above the *left* knee for some hours, and then subsided. Medicines and diet to be continued. A liniment was prescribed for the leg, consisting of tincture of Arnica montana, laudanum, and soap liniment. Ten minims of the tincture of the sesquichloride of iron were ordered to be taken in water whenever the palpitations might recur.

On the 18th great relief was obtained by the discharge of pus through one of the incisions over the tibia. The swelling and glossy appearance of the leg had disappeared previously to the visit.

On the 23d the patient was removed into an adjoining chamber, and she began to sit up a short time daily, and to take solid food. She rested well at night. The leg presented a natural appearance, and the discharge from the incision continued. There was pain in the groin and hip of the left side, which commenced the day before, and during the preceding night there were three several attacks of palpitations, lasting a few minutes only. Medicines and diet as before. The iron drops appear to check the palpitations quickly.

On the 26th palpitations troubled her at times all day. Two cathartic powders were given.

On the 27th the patient dressed herself. The suppuration in the leg had entirely ceased, and all pains had left the lower extremity.

On the 2d December the patient was removed to another house in Hoo. Medicines in great measure discontinued.

On the 5th the left leg was again swelled, but of a shining white colour. There had been anorexia for two days. Iodide of potassium in infusion of calumba was ordered, as also a liniment.

She soon recovered her appetite, and on the 9th walked out of doors.

She had rigors at 4 A.M., 12th Dec., succeeded by rigors and sweating.

On the 13th the pulse was 102; tongue whitish. No pain. Both legs swelled, but not pitting on pressure. Ten grains of quinine were given in a draught, and a mixture of quinine and extract of taraxacum was ordered for her.

She had no return of rigors or fever, and the last medicine was sent her on the 19th December, when she was discharged (68 days subsequently to her confinement, and 65 days from the commencement of her illness).

Mrs. S. quickly regained strength, and lost the swelling of the legs. In the course of a few weeks she removed to a village three or four miles distant from Hoo, and she is now in good health. Her milk had gradually ceased during the latter part of her illness.

The infant died at the age of three months, under marasmus, having suffered from aphthæ from an early period of its life.

REMARKS ON TREATMENT, &c.—From several cases that I have witnessed, in which there has been diseased blood, I would recommend an antiphlogistic mode of treatment in the first instance, quickly succeeded by stimulants, tonics, and especially chalybeates for the purpose of improving the quality of the blood. The use of purgatives—such as calomel, jalap, and scammony—throughout the entire duration of the disease, appears to me to be of great importance, for the purpose of eliminating by the secretions foreign matters in the blood, and also to produce a healthy condition of the assimilative functions. I consider that it is often necessary to induce catharsis, carefully supplying stimulants and nutriment at the same time. Without entering into the pathology of the case, I would propose the query,—Was the febrile paroxysm of the 12th Dec. an attack of ague? Hoo is infested

with intermittent fever, and Mrs. S. had had that disease some years before her illness. Did removal to a strange house induce ague, or was she rendered liable to it by her late illness? Or, finally, was the paroxysm unconnected with malaria?

There was no epidemic of puerperal fever, during the autumn of 1850, in the vicinity of Rochester, but there were several cases of weed.

COUP D'ŒIL RAPIDE SUR
LA PARALYSIE GÉNÉRALE
IMPARFAITE
CHEZ LES ALIÉNÉS.

PAR LE DOCTEUR S. ESCOLER,
Médecin des Hospitaux civiles de Madrid.

L'OBSERVATION, a-t-on dit, c'est le flambeau des sciences, et c'est encore l'observation qui produit une certitude presque mathématique, sans laquelle les sciences n'auraient ni force ni puissance. Sans doute, l'étude des aliénations mentales, malgré les beaux travaux des médecins modernes, mérite encore qu'on fasse des nouvelles recherches, des nouvelles observations. Quelle jolie étude pour celui qui veut l'entreprendre, et quel champ si vaste que ces maladies nous présentent.

Profitant de l'occasion où je me suis trouvé, j'ai étudié assez minutieusement et avec un grand intérêt, les malheureux qui par leur état pathologique, sont séparés de la société. C'est d'une maladie, ou bien d'une complication, qu'on trouve principalement chez les aliénés que nous allons nous occuper à présent.

La paralysie générale imparfaite est une maladie chronique caractérisée par l'affaiblissement du système musculaire et de l'intelligence. Elle se manifeste par le bégaiement, la difficulté de la marche et la perte de la mémoire.

Cette définition renferme, comme plusieurs autres, quelque chose de vague; mais aussi, dans peu des mots, elle fait connaître ce qu'il y a de plus essentiel: c'est par cette raison que nous avons voulu l'admettre. A présent, par une description détaillée, on saura mieux apprécier la maladie.

Lorsqu'on examine avec attention plusieurs malades, qu'on suit la marche

de la maladie, et qu'on groupe les symptômes qu'on a observé, on est porté à établir *trois degrés*, que comme on verra plus bas ils suivent d'une manière régulière.

1^{er} degré.—Le malade éprouve de la difficulté pour s'exprimer, il y a chez lui un bégaiement tout différent à celui qu'on observe généralement; mais l'autre ne peut pas se bien définir: il est plus rapide, plus court; enfin, on le distingue du second, quand on établit le parallèle entre deux personnes qui sont ensemble, dont chacune soit atteinte de l'un et de l'autre. Lorsque la maladie débute, le malade articule quelques phrases avec plus de lenteur, et ce signe a valu à Esquirol pour reconnaître au commencement cette affection. On reconnaît aussi à ce degré, lorsque le malade parle, un sifflement tout particulier, lequel est entremêlé dans les mots. La mémoire se perd peu à peu, et quand il écrit, il oublie des lettres, des mots*: ceci se répète si souvent que les malades mêmes en sont étonnés. Cette maladie pourrait attaquer les personnes qui jouissent de bon sens; elle peut se déclarer par elle-même, sans complication; mais quelque temps après il survient l'aliénation mentale: dans ce cas, cette observation se fait parmi les malades qui ne sont pas aliénés, et même, parmi ces derniers, il y en a capables de la faire. L'inouïence [*sic in text*] est aussi un caractère qui ne manque presque jamais. La marche se fait mal, et quand les malades veulent se servir des bras, les mouvements sont irréguliers. Des mois et des années peuvent se passer gardant les malades dans cet état, auquel les parents n'attachent pas une grande importance; tandis que pour le médecin c'est une chose d'une valeur bien différente. Malgré ce trouble, le malade garde de l'embonpoint, et le sommeil généralement est bon. On doit avouer qu'il faut avoir l'habitude des aliénés pour reconnaître la maladie au premier degré, et que, sans cette habitude, on serait porté à faire un pronostic favorable que le temps pourrait démentir.

2^d degré.—Les symptômes que nous avons décrit augmentent, et la maladie est évidente; c'est alors que le malade

ne peut pas régler la locomotion ou la marche: celle-ci est brusque, saccadée, et le balancement très-marqué: il tombe souvent, et ceci n'est que la conséquence de la manière si brusque qu'il emploie pour marcher; c'est par cette raison que le tête et le corps sont toujours pleins des contusions, comme nous avons eu l'occasion de l'observer. La parole aussi est plus embarrassée, et il revient souvent sur les mêmes mots. Aussi, lorsque le malade lève le bras pour porter un verre à la bouche, on voit alors qu'il hésite, et qu'il fait le même mouvement à différentes reprises pour arriver au but qu'il s'est proposé. A cette période, la démence se caractérise, il y a presque toujours monomanie ambitieuse: c'est cette variété qu'on trouve le plus souvent compliquant la paralysie chez les aliénés. L'observation a démontrée parfaitement que cette maladie peut compliquer toutes les folies, quelle que soit la forme du délire, comme le dit très-bien Esquirol. Peu à peu la maladie prend plus d'intensité, le malade pousse des cris, il y a des grincemens des dents, répétés assez souvent, et chez quelques aliénés on observe la répétition des quelques mots favoris, qui dénotent la grandeur; comme Dieu, roi, millon, etc. En mangeant, on voit chez eux de la voracité, et il y en a qui placent des pierres dans la bouche pour exciter le sens du goût, qui commence à s'émousser: la gloutonnerie peut être la cause de leur mort: ainsi dans les établissements des aliénés, pour éviter un accident funeste, on a le soin de bien découper les morceaux de viande qu'on leur sert, à fin d'éviter l'introduction d'un morceau capable d'asphyxier le malade: un oubli de ce soin si minutieux et si nécessaire a la fois, a suffi pour donner la mort à un malheureux. Le sens de l'ouï suit la même marche que le sens du goût; c'est-à-dire, il s'émousse aussi, et devient plus difficile. On peut tordre la peau, la pincer, même y introduire des aiguilles sans que le malade le sente. Le repos est presque impossible: l'insomnie arrive, et il est dans une agitation continuelle. La constipation a souvent lieu chez eux; les matières fécales séjournent quelquefois longtemps dans le rectum, et alors on est obligé de débarrasser cet intestin par un moyen mécanique, car les moyens thérapeutiques sont inutiles: on doit surveiller avec une grande circonspection

* La perte de la mémoire n'est pas une chose rigoureuse, mais ce symptôme se lie souvent aux autres, et vient aider à composer le groupe qui caractérise la maladie.

cette fonction, car le séjour prolongé de ces matières pourraient donner lieu à la gangrène, qui, sans doute, entrainerait le malade plus vite. Le même soin doit exister pour l'urine, car ici, une fois la vessie est pleine, elle laisse échapper le trop plein; par conséquent, on doit sonder les malades, quand ils sont dans ce cas. La constipation alterne aussi avec la diarrhée; et alors le malade fait sur lui tous ses besoins. A cette période, il peut encore conserver de l'embonpoint, excepté dans les membres qui deviennent plus maigres.

3^{me} degré.—Ici on trouve que le malade ne peut plus marcher; les bras ne peuvent plus se soulever, et il n'est pas maître de régulariser les mouvements pour manger. La parole n'a presque plus lieu, les cris sont déchirants: les goûts sont bizarres, car déjà les sens sont perdus: souvent la constipation est opiniâtre, sans qu'elle puisse être combattue par les laxatifs et les lavements. L'amaigrissement survient, et si la maladie continue, la déglutition ne peut pas se faire à cause de la paralysie de l'œsophage; le marasme arrive aussi, et le malade succombe.

Voici les trois degrés ou bien les trois périodes que parcourt la maladie chez les malheureux, qui en sont atteints. Il ne faut pas croire que ce tableau se trouve d'une manière exacte, chez tous ces individus, car la nature est si bizarre, qu'elle n'en fait éclater quelquefois, que quelques uns, et c'est par eux que le praticien doit juger. Si chaque maladie avait une manifestation rigoureuse et invariable, quelle serait alors la difficulté du diagnostic?

Il n'est pas rare qu'avant le 3^{me} degré, on voit survenir quelque cause de mort: leur chutes sont très-dangereuses, et elles peuvent déterminer un résultat funeste. Vers la fin de la maladie, les malades présentent un aspect des plus dégoutants, malgré tout le soin qu'on ait avec eux, car ils se traînent par tous les endroits mal propres, et font leur besoins sur eux, sans qu'ils se donnent la peine de bouger de place.

La maladie dont nous parlons se développe sans cause connue, ainsi nous ne nous occuperons que des conditions. On a observé que les hommes en sont beaucoup plus fréquemment atteints que les femmes, et que la maladie ne se déclare guère avant 30 à 35 ans, ni après les 60. Cette complication s'observe plutôt parmi les aliénés qui se

sont livrés aux plaisirs vénériens, aux boissons alcooliques, et aussi chez les personnes qui ont abusé du mercure, comme nous l'avons observé. Parmi la classe riche, on en trouve un plus grand nombre des paralytiques que dans la classe pauvre, parce que ces gens là étant habitués à une vie moins active, leurs impressions sont plus fortes, et produisent sur elles des effets plus graves. Il paraît que le climat est pour quelque chose aussi, car on a observé encore que cette complication se présente plus souvent dans les pays froids, que dans ceux du midi.

La marche de la maladie est assez régulière, malgré qu'elle ait lieu plus ou moins doucement. Pendant son cours, on peut observer la paralysie d'une partie quelconque du corps, soit la paraplégie ou l'hémiplégie. Ces attaques d'apoplexie ne sont pas mortelles, mais ils font avancer la maladie, par conséquent ils sont fâcheux.

Si la malade tombe dans la démence, le pronostic n'est pas aussi fâcheux que celui qu'on peut porter lorsque la paralysie s'accompagne de monomanie ambitieuse; il n'est pas aussi grave dans le premier cas que dans le second, car le malade peut durer plus long-temps; mais nous croyons que la maladie est mortelle. Les exemples de guérison sont si rares dans le second degré, que lorsque la maladie arrive à cette période on peut dire que la mort est certaine. Si le malade dure quelque temps, la mort arrive par innervation, c'est-à-dire, les sens finissent peu à peu.

Les altérations qu'on trouve dans le cerveau, à l'ouverture des cadavres, sont très-variées, et c'est par cette raison qu'on ne peut rien assurer d'avance; ainsi, on a trouvé des fausses membranes, de la sérosité infiltrée dans le cerveau, des hydatides plus ou moins volumineuses; la coloration de la superficie du cerveau, on a même parlé de la consistance de ce viscère, de l'épaississement de l'arachnoïde, comme si la paralysie était le résultat de la méningite chronique; mais l'expérience n'est pas venu confirmer cette opinion. Si la monomanie ambitieuse a été bien caractérisée, on peut dire qu'à l'autopsie on trouvera de la sérosité infiltrée dans le cerveau.

Arrivons à présent au *traitement* qui malheureusement est presque toujours infructueux; cependant, il faut en dire quelques mots. On a prétendu que la

saignée est favorable, mais nous croyons qu'elle ne doit être employée que quand l'individu est robuste; si la maladie comme nous venons de le dire était la cause d'une inflammation, alors la méthode antiphlogistique serait convenable: elle convient généralement à une constitution pléthorique; aussi on ne doit pas négliger de faire mettre des sangsues au périnée. Les épispastiques ont été employés, même le moxa sur le crâne; des purgatifs drastiques, des laxatifs. L'un des meilleurs moyens, nous le croyons, c'est la digitale pourprée: nous avons vu à l'Hôpital générale de Madrid un individu atteint de paralysie générale, laquelle était arrivée au second degré. La digitale lui a été administrée à haute dose (jusqu'à 30 grains par jour), et on a arrêté la marche de la maladie, et même on a diminué de beaucoup les symptômes: malgré que chez lui la parole fût assez correcte, il avait quand il parlait un sifflement très-remarquable, et facile à apprécier*. Le point important c'est une bonne diététique, des bons aliments, de la propreté, des laxatifs de temps en temps, de l'exercice, et il faut aussi remplir les indications générales qui se présentent. Nous terminons en disant que le grand nombre des moyens thérapeutiques qui ont été employés dans cette maladie prouvent leur insuffisance.

Qu'est-ce que la paralysie générale chez les aliénés? Où est-ce le siège de cette maladie? Peut-on répondre à ces questions? Tout reste muet dans la science, et alors on est obligé à garder un profond silence. Des opinions diverses, données sans doute par des hommes très-recommandables, c'est ce qu'on trouve à la place d'une certitude, que serait si avantageuse à la science. Ainsi on a dit que c'est un méningite avec un peu de sérosité, que c'est une inflammation de la substance grise du cerveau; mais on peut le nier car les antiphlogistiques n'y font rien. Nous croyons que cette maladie se forme par une série des fluxions: deux ou trois coups de sang vers la tête; mais il n'y a pas pour cela inflammation, et tout traitement opposée à celle-ci est inutile. A la suite de ce mouvement sanguin il y a un mouvement séreux qui continue, et alors on pourrait dire que la paralysie dont nous parlons, n'est que le résultat et la conséquence de l'hydrocéphale chez les adultes: il ne faut pas oublier que chez ces derniers les os

du crâne ne peuvent pas se distendre comme chez les enfants, et la congestion a lieu. Malgré que celle-ci soit notre opinion, car elle nous a paru la plus satisfaisante, nous profiterons toutes les occasions pour la bien étudier encore, et voir si nous devons persister dans notre idée, ou la modifier.

Madrid, le 30 mai 1851.

*** The practical character of this paper has induced us to give it insertion in the French translation in which we received it. At the same time it has been obviously very badly translated from Spanish into French. We have corrected many errors, but have left some passages which appear faulty, in order to avoid the risk of rendering the author's meaning obscure.

LONDON CHALK WATER AND BOMBAY SALT WATER.

THE subjoined paragraph, extracted from the *Bombay Gazette*, contains the opinion of a distant observer on the complaints made respecting the quality of London water:—

There is now hardly a drop of water in the whole town of Bombay, certainly not a drop of *good* water, procurable at any price or at any terms. Possibly to a votary of "Hodgson or Bass," who never imbibes the limpid fluid, save in the shape of *chasse-café* or some similar post-prandial qualification, the matter may ostensibly be but of little consequence; but to voluntary or to involuntary teetotallers it becomes of somewhat serious import. We believe the London laundresses complain that the water supplied to them contains so much chalk as to render the consumption of soap almost useless, and the whitening of their clothes almost hopeless. Here in Bombay we have more than this to complain of. We cannot even get a dinner cooked correctly, and "as it ought," from the awful predominance of "muriate of soda" which now abounds in our wells. The matter is in fact too bad. Europeans do not perhaps suffer greatly. By the payment of a small tax to water-carriers they may obtain favour, and tolerably good water, from some of the wells in the more elevated portions of the island; but the poor natives are obliged to put up with it, in a filthy, impure state, and in scanty enough quantity also. Yet they are sufficiently taxed to insure good water for them, if matters were well managed amongst us.

MEDICAL GAZETTE.

FRIDAY, SEPTEMBER 5, 1851.

WE are informed that in the ensuing medical session it is the intention of the authorities connected with one of the principal London schools to open a course of lectures specially devoted to MILITARY SURGERY, so that this metropolis will in future possess the advantages that Edinburgh and Dublin have enjoyed for some time past. Two gentlemen, we are given to understand, who are in every way qualified for this department, from their long experience and residence abroad, are in treaty with the several public departments, and hope, through the aid of the East India Board of Directors, to be enabled to establish this course of lectures on a permanent basis. It is not their intention to enter on any of the subjects at present available to students at the different colleges and schools, but barely to confine themselves to those subjects which more immediately appertain to the duties of a medical officer on his first joining his regiment, ship, or depôt, on home or foreign stations. These duties very often become at once onerous and anxious, more especially on a foreign station, where he has not only to contend with climate, but with an entirely new class of diseases, and with the majority of which he is in all probability perfectly unacquainted. How few young surgeons hear or see much of what they have to meet with daily after their arrival in a tropical climate! Our hospitals rarely afford an opportunity of studying any of the diseases incidental to Orientals, or Aboriginal tribes, or even to Europeans long resident in tropical countries. The subject of Climate itself is one requiring much careful con-

sideration in relation to their own health after their arrival, and still more to the large bodies of men under their medical charge then and subsequently.

It is not yet decided whether this course of lectures may not better be made a Summer or a Winter course. On two grounds it appears desirable to adopt the former: first, because, on the matter being put to some of the leading men in the profession, it was objected to its being a Winter course,—for the reason, namely, that the students are already overworked, and have very little time at their command for any more lectures; and secondly, that the great body of surgeons from the East India Company going to India, leave this country in the autumn; so that they could thus attend the Summer course at their leisure, and when not over-pressed from their other studies. And then, again (and this is an important consideration), they would go out fully stocked from these lectures, and be the better prepared to enter upon their duties, and carry their recent theories and deductions into practice at once. It is, then, for the present entirely a matter for the public Boards to arrange this point as to a Winter or Summer course. It should be borne in mind that this course is not intended for all students, but for those who have completed or nearly finished their studies, or who have already passed their examinations; so that it is of little importance, we conceive, whether it be a Winter or Spring course, so far as advanced students or surgeons are concerned.

The Winter has its advantages, and lectures are always better attended at this season than in the Summer, when there are generally greater attractions out of doors, and when attendance is not made compulsory. We never recollect witnessing a well-attended course of Sum-

mer lectures, unless it were those on Botany; and even then we question much if it be not Nature's beauties more than the Professor's art that secures an attendance in the fields, but not always an audience.

The course of lectures on Military Surgery delivered in Dublin may probably form the basis of these lectures; but the object is to condense the matter into as narrow a compass as possible, and only give the more practical details of the surgeon's duties in his different capacities at home and on foreign service. It is expected that the lectures will be given in connection with one of the present colleges or hospitals, and that the different corporate bodies, with the public Boards, will patronise the lectures in this department in every way in their power. We are permitted to annex the accompanying correspondence with Mr. Tufnell on the subject of his lectures, in order to show the great importance which is attached to this new branch of surgical study by the heads of the various Medical, Naval, and Ordnance Departments. We also subjoin a syllabus of Mr. Tufnell's course of lectures. This will probably form the basis of the course about to be delivered in London. We therefore give it to our readers, in order that they may judge for themselves of the nature of the subjects, and their vital importance to students, surgeons, and the public service at large. We must confess our surprise that so indispensable a branch of medical tuition has been so long overlooked in our great metropolitan schools or colleges. We hear that Dr. Scott, the Examiner to the East India Board of Directors, is favourable to this project. We can only say that we wish success to those gentlemen who are about to undertake this new duty. We feel confident that, sooner or later, they will meet with very general support.

MILITARY SURGERY.

Copies of Correspondence from the Directors-General of the Army, Navy, and Ordnance Medical Departments, recognising the Course of Lectures on Military Surgery as equivalent to Six Months' Surgery.

Army Medical Department,
5th December, 1846.
13398.

Sir,—I have to acknowledge the receipt of your letter of the 26th ultimo, and in expressing my approval of the arrangements you have made for affording the students in Dublin the advantage of attending lectures on military surgery, to state that such attendance will be considered equal to a course of six months' surgery in the professional qualifications of candidates for admission into the Medical Department of the Army.—I am, sir,

Your obedient servant,

J. M'GRIGOR,
Director-General.

T. J. Tufnell, Esq.

Director-General of the Medical
Department of the Navy.
No. 3053.

Admiralty,
14th December, 1846.

Sir,—I have to acknowledge the receipt of your letter dated the 10th instant, inclosing a prospectus of your course of lectures on the principles and practice of military surgery, and of the diseases peculiar to soldiers and seamen, and requesting that the same may be recognised in this department as in the Army; and, in reply, I have to acquaint you that I approve highly of the course of education detailed in the prospectus, and, like Sir J. M'Grigor, I shall consider your course equal to six months' attendance on surgical lectures.

I am, sir,

Your humble servant,

W. BURNETT,
Director-General, &c.

Mr. T. J. Tufnell,
Surgeon to the Military Prison,
Dublin.

Ordnance Medical Department Office,
Woolwich, 23d Dec. 1846.

Sir,—From having been in a distant part of the kingdom, it has not been sooner in my power to acknowledge your letter of the 10th instant, inclosing a prospectus of your course

of lectures on the principles and practice of military surgery, and on the diseases peculiar to soldiers and seamen.

In expressing my great gratification at your having instituted a course of lectures which are likely to prove highly useful in the Naval and Military branches of the medical service, and my approval of the course detailed in the prospectus, I have to state that a regular attendance on your lectures during the course, certified by yourself in the customary manner, will be considered equal to six months' attendance on surgical lectures in the professional qualifications of candidates for admission into the Ordnance Medical Department, as in those of the Army and Navy.—I am, sir,

Your obedient servant,

JOHN WEBB,

Director-General of the Ordnance Medical Dept.

T. Jolliffe Tufnell, Esq.

Surgeon to the Military Prison,
&c. &c., Dublin.

Syllabus of a Course of Lectures on the Principles and Practice of Military Surgery, delivered during the Winter Session of 1850 by JOLLIFFE TUFNELL, Esq., F.R.C.S.I., M.R.I.A., Assistant Surgeon to the Forces in Ireland, and Surgeon to the Military Prison.

PART I.—The examination of recruits for the public services, and the points on which the efficiency of men for each service depends—The dieting, clothing, and exercise of troops in the various stations—Construction of permanent and temporary barracks, camps, and hospitals—Discipline and management of the same—Ventilation, drainage, and the phenomena of miasma and contagion—Accommodation of troops on board ship, in camp, in barracks, and in billets—Circumstances affecting their health in the different situations in which they may be placed—General observations on the means of preserving the health of soldiers and seamen—Means of transporting sick and wounded, illustrated by models, plans, and diagrams.

PART II.—General observations on inflammation as connected with the injuries to which soldiers and seamen are more particularly liable—Burns from explosions of gunpowder—Gunshot

wounds—Sabre and bayonet wounds—Ophthalmia, as it has affected and does affect British troops—its sequelæ and their treatment—The venereal disease, and the use and abuse of mercury—Diseases of the generative and urinary organs, unconnected with syphilitic origin—Diseases of foreign stations, more particularly those of the Tropics—Cholera, dysentery, hepatitis, beriberi, Guinea worm, yellow fever, coup de soleil, &c. &c.—The prescription of medicines according to the contents of the regimental chest.

PART III.—Intemperance, its baneful effects in the British service—Delirium tremens—The use and abuse of ardent spirits—Smoking, and the use of tobacco—their immediate and remote effects on the nervous system and digestive organs—Military discipline, and its effects upon the moral and physical powers—The general consideration of military punishments, flogging, solitary confinement, hard labour, &c.—Fictitious diseases and malingering—Causes which permanently disqualify men for the services—The general duties of the military surgeon on board ship, in quarters, and in the field.

ON THE USE OF HOT WATER IN SPRAINS.

BY SAMUEL JACKSON, M.D.

IN nearly all cases of external violence which do not implicate any of the viscera, the immediate use of hot water is, as I sincerely believe, the best as it is the surest cure and preventive of pain. If you are about to have a tooth extracted, hold hot water in your mouth both before and after the operation: if you must have a felon lanced, hold the hand in hot water for a long time both before and after the cutting. My first ease of what is vulgarly called "inverted toe nail" occurred to me after the patient had thoroughly relaxed the part by warm poulticing for many days, and I did not proceed to the operation of splitting the nail and eradicating the offending portion, till he had bathed his foot a long time in hot water. I had been taught in Dorsey's Surgery that it was a most painful operation, and I was therefore surprised, notwithstanding my hopes from the relaxation, to find the young man making very little complaint. I have several times performed this operation, and owing as I believe to the hot bathing, I have not found it severe in a single case.—*American Journal of the Medical Sciences.*

Reviews.

Henke's Zeitschrift für die Staatsarzneikunde. Erstes und Zweites Vierteljahrheft. 1851.

THE first quarterly part of this journal for the current year opens with a paper of merely local interest, on the Effects of the Hours of Labour on the Health of the Workmen in Saxony employed in the *Manufacture of Beet-root Sugar*. This is followed by an account of the origin and progress of the *Typhus Fever* which, in 1847, ravaged the whole of Upper Selesia,—a district closely resembling in many respects some of the worst parts of Ireland. Dr. Liman, the writer, is a decided contagionist. The atmosphere he considers the vehicle of the typhous miasm, the spread of which is attributed by him to the unhealthiness of the habitations, deficient food and clothing, deteriorated health, famine, dirt, and moral debasement. The larger half of this, and part of the succeeding number, is taken up with a dissertation by Dr. Ritter on the *Millzbrand*,—an epizootic very fatal to various of the domestic animals on the Continent, and which is communicable from them to the human race. The characteristic feature of this disease in both is the eruption of carbuncles or pustules, accompanied or followed by fever of a malignant kind.

With the exception of a short paper on Medical Politics, the rest of the number is occupied by a Report, by Dr. Siebert, on a case of *Infanticide*, where death was attributed to extravasation of blood within the head, the effect of violence after the birth of the infant.

The second quarterly part is of a more varied and instructive character.

The first contribution, by Dr. Rösch, is devoted to the subject of *Institutions for the Curative Treatment, Care, and Education of Imbeciles*. The writer argues strongly in favour of these establishments being supported and managed by Governments, in place of their being left to the enterprise of individuals, or that of a few charitable persons, as has hitherto been the case. He would separate the adult from the young of this unfortunate class, entrusting the superintendence of both to medical men, considering curative means of even more

importance than moral ones, placing the staff of nurses and teachers under their orders.* His directions for the site of such establishments, and their various accessories, are very judicious. It is only to be regretted that in the account he gives of the existing institutions of this kind he has said nothing of the results obtained from the benevolent exertions hitherto made for raising the status of the imbecile and the idiot, as it is to be feared that to the comparative failure of these the languishing state of these institutions at present is in great part to be attributed.

A case of *Feigned Insanity* is given by Dr. Pfeufer at p. 325, where a butcher, who, on a journey, had left his wife to perish of cold by the way, affected to be troubled with visions. The examiners could detect no traces of undoubted mental disorder in the party.

At p. 346 Dr. Suckow details the particulars of a case of *Parricide*, where the question arose as to the free agency of the individual, and whether he could have shot his father in that intermediate state between sleeping and waking, where consciousness is but partially restored, to which the German jurists have given the name of *Schlaftrunkenheit*. The son had nothing to gain by his parent's death: they lived together on amicable terms, devoted their time in company with each other to the sports of the field, and there had been no cause of quarrel between them: both were in the custom of keeping their fowling-pieces in their respective sleeping apartments, not merely to avoid the risk of their being stolen, but also in order to be prepared for a night attack from some loose characters who had settled in their vicinity. On the eve of the fatal occurrence, there had been some talk of such a danger, and at 10 o'clock both retired to bed, taking with them their loaded guns; the two apartments in which they respectively slept being only separated by a glass door, which usually stood open. About 1 in the morning the father got up to the water-closet without striking any light, it being at the time bright moon-light. He was in the act of returning to bed, when the creaking of the privy door, which was opposite to the glass one, caused the son to

* Many of Dr. Rösch's views coincide with those of the Secretaries and Medical Officers of the Colchester "Asylum for Idiots" as detailed in the circular lately issued by them.

start out of bed, who, believing the person before him to be a house-breaker, seized hold of his gun, and shot the supposed intruder through the heart. The gun was no sooner discharged than the son laid hands on his victim, exclaiming,—“Dog, what are you doing there in the closet?” on which the latter, with the cry of “O Jesus!” on his lips, dropped down dead, when the son then only became aware of his mistake.

Taking all the circumstances into account, the reporter considers that the son was *not accountable* for his action at the moment of the homicide.

A similar occurrence is related by Pyl (Repertor. f. d. gerichtl. Arzneiwissenschaft, vol. iii. p. 71), where a person, startled out of a heavy sleep, struck at, with a wood-axe, and killed his wife, who, standing by his bed-side, had been momentarily mistaken by him for a ghost.

A case recorded at p. 359 is adduced by Dr. Roth as an instance of death by *Smothering voluntarily produced*,—an event without a parallel in medical records. The question submitted to the reporter was, as to whether the death of H., a servant-maid, had been the result of suicide or of homicide?

The deceased was well-formed, above the middle height, and about twenty-five years of age. She had been seen to retire to her sleeping-room at 9 o'clock one evening in her usual state of health and spirits. The apartment was only separated by a partition from the one in which her master and mistress slept, and was over a room occupied by others of the household. At half-past 5 on the following morning the master knocked against the partition to awaken H., but receiving no answer supposed she had risen, and gone out to her work. On getting up, however, he found all the doors and windows of the house closed, when he went into the servant's room, but did not find her there. On the bed was an axe of a peculiar shape, employed in that part of the country for lopping off branches from the trees, and which used to hang behind the door. The blade of the axe rested against the back of the bed, and the handle on the bed. Beside it lay the best bonnet of the servant, which she used to keep in her chest. The bed appeared to have been slept on. After searching the well, lest she had drowned herself, H.'s father was sent for from a

neighbouring village. On his arrival, he suggested that the chest should be opened to learn in what trim his daughter had left the place. Finding the chest locked, and the key missing, a blacksmith was got to force it open, when the body of the servant was discovered in the chest, lying in a prone position on the left side, with its knees drawn up, the upper extremities flexed, and the missing key grasped in the woman's right hand. The chest was above $4\frac{1}{2}$ feet in length (4 feet 2 inch. Germ.), and of proportionate depth. It locked itself on the fall of the lid, and could not have been opened from the inside. The corpse was nearly dressed, and the vest (kamisol) was put on with its inner side out. On the following day, the body, which had been removed and laid on a bed, was viewed by the reporter. The cuticle was abraded and reddish-brown at seven or eight points, about the centre and upper part of the forehead. The largest of these abrasions corresponded with the thick part of the axe, and underneath them the integuments were slightly swollen and bluish. The face and upper part of the chest were mottled with cadaveric lividities, the ears were blue, the eyelids closed, the conjunctivæ injected, and the pupils dilated. There was bloody froth about the lips and nostrils, partly dry, partly fresh, giving this part of the face a blood-stained appearance. Bloody froth was issuing at the time from the right nostril. The mouth readily opened, showing the tongue in its natural position. The key was still grasped in the right hand. With the exception of the abrasions on the forehead no traces of injury were detected on the body. The clothes were entire.

From the foregoing circumstances the Reporter was of opinion that the deceased had employed the axe which hung in her room to kill herself in the way she had seen others slaughter oxen, and that failing in the attempt, and perhaps ashamed of the injuries on her forehead, she had then shut herself up in her chest, and perished by smothering. This conclusion satisfied the law authorities so completely, that they decided that there was no necessity for making a post-mortem inspection.

A case of dangerous irritant effects on the alimentary canal, from the use of pills containing a mixture of *Jalap*, *Gamboge*, *Colocynth*, and *Calomel*, de-

tailed at page 376, possesses no features of special interest. The narrative which succeeds is more deserving of notice, though chiefly made up of borrowed materials.

In connection with an investigation into a charge of *poisoning of domestic fowls with Arsenic*, presumed to have been *Phosphorus*, detailed by Dr. Krügelstein, illustrations are given of the effects of the former poison on ducks and hens, and of the latter in man. The two cases of poisoning in cows at page 409 are almost valueless, the proof of the poison having been phosphorus resting on mere conjecture.

From the occurrence which gave rise to the investigation in question, we gather that the effects of the arsenic on the poultry were not uniform, some of them having been found dead without having been observed to suffer previously, while others of them were seen to have been ill for days before. Amongst these last the avidity shown for drink seems chiefly to have attracted attention. In one of the fowls, seen by a veterinary practitioner (Thierarzt), it was stated by him that on separating the feathers on its head the skin beneath was blue, that the abdomen was hot and swollen, the crop enormously distended with gas,—a circumstance remarked in others,—the cavity of the mouth white and slimy, and the wattles bluish. He prescribed fresh butter, and the bird recovered. In two other fowls, which were dead before they were shown to him, the same person found inflammatory appearances on the lining of the crop, stomach, and intestines. Arsenic in considerable quantity was detected in a doughy mass, of which the several fowls affected had partaken, but the poison does not appear to have been sought for in any of their bodies.

In the cases of poisoning by *Phosphorus*, collected by Dr. K., the smallest fatal dose was a grain and a half, the earliest period of death forty hours after its ingestion.

Cæsarean section.—The legal proceedings recorded by Dr. Jochner, at p. 416, and the remarks by Dr. Landsberg, at p. 467, show us that the enactments founded on the old Roman and the Canon laws still continue in force, not only in Catholic, but also in some of the Protestant States of Germany. By these it is made imperative on the accoucheur to have the

Cæsarean section performed on the body of every pregnant female who may have died undelivered subsequent to the completion of the sixth month of utero-gestation.

The futility of retaining such an enactment, which has even been recently renewed in one of the European states (Sardinia), and which constituted the medical practitioner a murderer if he failed to comply with it, is shown by Dr. Landsberg, who states that in ten instances in which he has thus been compelled to have recourse to the Cæsarean section the children were all found to be dead. In Dr. Jochner's case, which came regularly before the legal tribunals on account of the omission to have the operation performed, the woman had been two hours dead previous to the arrival of the surgeon.

An anonymous paper, at p. 346, contains a Report upon certain medicinal preparations, containing borax, aloes, and myrrh, supposed to have been prescribed to a pregnant female as *abortives* by a practitioner. Amongst these agents we find classed *effervescing powders*, the gas evolved by which the Reporter considers to be dangerous to the pregnant female—an opinion adduced by him on the authority of Jahn and Vogt.

The Parents' Dental Guide: with Remarks on the use of Impure Gold for Dental purposes. By WILLIAM IMRIE, Surgeon-Dentist. 5th edition. London: Churchill. 1851.

THERE is much common-sense in this little essay, without any of those absurd or exaggerated statements regarding diseases of the teeth which are to be found in showy brochures published merely for the sake of attracting patients. Mr. Imrie, the author of this little treatise, has a higher and a wiser aim; as a dental surgeon of independence and respectability he has been many years before the public, and has acquired a reputation, and with it a practice, which places him above the necessity of imitating the host of advertising dentists who daily occupy the columns of the newspapers.

To this edition is attached a short essay on the use of Impure Gold for Dental purposes. This was recently noticed in our pages. We recommend this Guide to all who desire to attend

to the development and preservation of the teeth.

1. *The New London Pharmacopœia, Translated and arranged in a Tabular Form, with the Edinburgh and Dublin Pharmacopœias; showing at one view the Differences in the Formulæ of the Three Colleges, together with the Tests given by each College for the Purity of the several Preparations: with Practical Remarks.* By PETER SQUIRE, M.R.I., Chemist on the Establishment of the Queen, H. R. H. the Prince Albert, H.R.H. the Prince of Wales, and the Royal Family. Large 8vo. pp. 222. London: Churchill. 1851.
2. *A Compendium of Materia Medica and Pharmacy, adapted to the London Pharmacopœia; embodying the New French, American, and Indian Medicines; and also comprising a Summary of practical Toxicology, with the Abbreviations used in Prescriptions.* By J. HUNTER LANE, M.D., F.L.S., F.S.S.A., &c., &c. Second edition. 12mo. pp. 310. London: Churchill. 1851.

THE nature of these two works precludes the necessity of a separate analysis of each.

Mr. Squire's is a most convenient and well-arranged work. On opening it at any page we have presented to us a statement of the materia medica or of the formulæ of all three Colleges, by which their variations may be at once comprehended. To the pharmaceutical chemist this must be a great advantage, seeing that such differences of strength exist in compounds having the same name, as must be productive of great confusion and uncertainty in the preparation of prescriptions. Indeed, no other mode of exhibiting them could have more forcibly set these differences in view; and we trust that the striking exposition thus made of these glaring and dangerous discrepancies may induce the authorities of our Colleges to unite in the construction of a national pharmacopœia having uniformity in its preparations. In the meantime, Mr. Squire's work will be found of very great utility, both to the prescriber and to the dispenser.

2. Dr. Lane's "Compendium" is a useful and well-executed little manual, of a portable size, and convenient

for reference in the momentary intervals of business engagements. It is very similar to Dr. Thomson's *Conspectus*, both in appearance and in the character of its contents. Its professed object is that of "an attempt to supply some of the deficiencies of the *Pharmacopœia Collegii Regalis Medicorum Londinensis*, 1851, and to give a translation of that work with the requisite chemical explanations." Its execution is of such a character that we can very safely recommend it to the notice of those who want a short summary of the *Materia Medica*.

On the Reciprocal Agencies of Mind and Matter, and on Insanity: being the Lumleian Lectures, delivered at the Royal College of Physicians, A.D. 1851. By J. C. BADELEY, M.D. Cantab., Fellow of the Royal College of Physicians, Inspecting Physician to the Lunatic Asylums of Essex, &c. Small 4to. pp. 60, London: Churchill. 1851.

THESE lectures having been published in our pages at the time of their delivery, we have now only to announce to our readers their republication in an independent form. To many, this will be a source of satisfaction, as it would not be easy to find so complete, and at the same time so elegantly written a view of the mutual relations and influences of the body and mind. The author does not enter upon profound metaphysical inquiries as to the nature of the connection between mind and matter, but places before the medical reader a more useful production—namely, an examination of the effects of that union, thus conveying information that the physician or surgeon may turn to daily and hourly account in intercourse with his patients. Two-thirds of the lectures are devoted to a practical summary of the present state of knowledge with regard to insanity. Dr. Badeley, we need scarcely add, concurs in the latest views of medical writers on the nature and treatment of this malady.

We recommend this short essay to the attention of all engaged in the practice of medicine; the perusal of it will both please and instruct them.

A Voyage to China; including a Visit to the Bombay Presidency, the Mahratta Country, the Cave Temples of Western India, Singapore, the Straits of Malacca and Sunda, and the Cape of Good Hope. By Dr. BERNCASTLE. 2 vols. 8vo. pp. 583. London: Shoberl. 1850.

THESE volumes present topics of considerable interest to the medical as well as to the general reader. Among those of medical interest we may point out—the author's observations upon Elephantiasis, as noticed by him in several cases at Cape Town; the description of the Jamsetjee Jeejeeboy Hospital at Bombay; the notice of the Parsee Hospital for Diseased Animals; notices of the Guinea-worm; the Lunatic Asylum at Poonah; Opium-smoking in China; observations on the Climate and Causes of the Insalubrity of Hong-Kong; with an account of Dr. Parker's Hospital at Canton, &c. &c.

Besides these and other subjects having especial interest for the professional reader, this narrative contains notices of numerous objects that possess attractions for educated persons in general. Thus, in addition to a descriptive record of places and things, the author has given in his journal many facts respecting the state of the Cape Colony, and its late struggles with the Home Government; particulars of the condition of the British Colony at Hong-Kong, &c. &c.

We have no hesitation in recommending these volumes, as calculated to convey a very fair picture of the present aspect of society, and of nature, exhibited in countries daily becoming less distant from us, and more important to us in our commercial and political relations.

Medical Portraits. Hogarth: 1851.

WE have here two highly-finished lithographic drawings of well-known members of our profession, one being a portrait of the late ASTON KEY, and the other of Dr. ALISON, of Edinburgh. We consider the former to be, on the whole, an excellent likeness of this lamented surgeon, whose untimely death occasioned universal regret. It is a three-quarter portrait, lithographed by Holt, from an original drawing by Richmond. The portrait of Dr. Alison is a highly finished drawing; and both are

creditable to artists and publisher. We have no doubt that these portraits will find an extensive sale among those who are pupils or admirers of the men whom they represent.

Proceedings of Societies.

SURGICAL SOCIETY, PARIS.

August 20, 1851.

Gastrotomy in Cases of Intestinal Strangulation.

M. DEMARQUAY made a verbal report on the work of M. Bitot, of Bourdeaux, in which he observed, that if gastrotomy is a safe operation in man, it ought to be adopted in the majority of cases of intestinal strangulation.

Apparatus of Cotton.

M. LARREY reported verbally on a brochure by M. Burggrave, on the uses of cotton apparatus, in which the author related the various uses of carded cotton, and the facility with which it may be applied to divers surgical purposes, more particularly to fractures. M. Larrey observed, that the author had overlooked the name of the originator of this mode of treating fractures.

ACADEMY OF SCIENCES, PARIS.

Aug. 4, 1851.

Chemical Researches on the Nature and Origin of the Acid Principle existing in the Gastric Juice.

M. BLONDLOT, Professor at the School of Medicine, Nancy, transmitted a memoir, in which he determines that the principle which imparts an acid reaction to the gastric juice is neither acetic, phosphoric, hydrochloric, nor lactic acid, but that it consists of a biphosphate of lime. The following is the result of M. Blondlot's analyses of the gastric juice:—

| | |
|------------------------------------|-------|
| Water | 96.71 |
| Biphosphate of lime | 0.60 |
| Chloride of calcium | 0.32 |
| Chloride of sodium | 0.16 |
| Hydrochlorate of ammonia | 0.36 |
| Organic matter | 1.80 |
| Loss | 0.05 |

100.00

Theory of Vision.

M. LOYER, Surgeon-Major of the 49th Regiment of the Line, addressed a note, which submitted these two principal propositions:—1. The retina, which must be regarded as a prolongation of the organ of perception, is put into communication with an external object by a chain of light which impresses it during vision. 2. The image formed at the bottom of the eye is the result of the concentration of the light in the eye, and is a secondary phenomenon of no service to vision.

August 18, 1851.

The Physiological Effects of Ascending to great Heights.

M. PAYERNE, of Cherbourg, communicated observations which tended to prove that the feelings of lassitude and dyspnœa which are experienced on ascending high mountains, are not attributable to an excess of oxygen in the air inspired, as some physiologists have thought. M. Payerne has observed precisely the same effects produced under circumstances diametrically opposite; *i. e.* in descending under the water to a depth of forty-one metres (=44·838 yards). M. Payerne stated that he had effected the descent by three different means, viz. by the ordinary diving-bell, by a diving-bell that he had himself contrived, and in his submarine ship. In these several apparatus the auditory nerve had been differently affected. The first caused a disagreeable, almost painful, sensation during the period of submersion; the second produced similar effects only in descending or ascending; and the third, during the time requisite to establish the equilibrium with the medium in which he was thus placed. Under other points of view the consequences were identical.

The author thus stated the results:—At thirty metres (=32·808 yards) of depth of water, provided the temperature of the atmosphere respired did not exceed 10° Cent. (=50° Fahr.), and at even less than this depth with a higher temperature of the air, the workmen are obliged to rest from their work more frequently than when in the open air, and their arterial pulsations are notably increased. The descent and continuance under water do not give rise to hæmorrhages, but the returning to the surface in diving-bells, and the escape of the compressed air from the sub-marine boat on opening its door to return into the ordinary atmosphere, have been known to be followed by epistaxis in some persons. In these cases, however, the hæmorrhage was not of the usual character,

i. e. consisting of drops of blood of a more or less florid colour, but it was a mere oozing of a saffron-coloured fluid, thinner than blood,—a simple exudation, without rupture of the capillaries. It could not be supposed that these effects were attributable to an insufficiency of oxygen, since a volume of air is condensed in proportion to the pressure to which it is subjected. At the greatest heights that have yet been reached, the air has still its relative proportion of oxygen.

M. Payerne added, that at small depths, *e. g.* a metre, a cubic metre of air will suffice for the respiration of four men, and it has even sufficed for five men, during one hour, and oxygen still remained.

The lassitude and dyspnœa which are experienced at great heights are owing, according to M. Payerne, to a disturbance of the equilibrium between the tension of the fluids contained in our organs, and that of the circumambient atmosphere.

Muscular Structure of the Uterus.

M. PIRTZ announced that he had examined the structure of the uterus of a pregnant woman, soon after death, both by the aid of galvanism and the microscope, and had been led to doubt the existence in it of true muscular fibre.

Hospital and Infirmary Reports.

KING'S COLLEGE HOSPITAL.

MARY ANN PENNIKET, aged 12, admitted into King's College Hospital, in August 1849, under the care of Dr. Todd. During the early part of her life she had been a healthy active child, and had continued so till three or four months before her admission, when her illness began. The first symptom remarked was an unsteadiness in her gait, and a trembling indecision in all her movements. If she carried a cup of water she would spill the greater part of the water on the ground, though not naturally by any means a clumsy child. Wherever she went, she walked evidently with care, and stumbled often if she attempted to run; considerable effort seeming to be required in order to plant her feet firmly on the ground. Instead of regaining her power, this inability to control her movements increased; she grew daily more and more awkward, and, in addition to this, began to suffer from violent paroxysms of pain in the head, and by degrees became subject to frequent attacks of vomiting, and it was soon discovered that she had partially lost her sight, the eyes be-

coming gradually brighter and more prominent than natural, with a strong vacant expression, the pupils being much dilated and only slightly influenced by even a strong light.

Subsequently, on two occasions, she suddenly lost her consciousness and fell—the second time as she was coming down stairs with a child in her arms. She remained insensible in each of these fits for ten or fifteen minutes, and, on coming to herself, lay for an hour or two in a sleepy lethargic state, but after this had gone off her general symptoms remained unaltered; the fits did not appear to leave her worse than before, nor did she appear to have suffered any injury from the falls.

It is to be especially observed that both sides of the body were equally affected, and had been so from the commencement of her illness. The unsteadiness in her walk at first was not referable to one leg more than to the other; the pain all along was all over the head, not in any particular part of it, and the loss of sight was equal in both eyes; but yet there was some little indication of the disease being one-sided, inasmuch as when directed to put out her tongue she thrust it out towards the right angle of the mouth.

When admitted, her mother considered that she had been getting better for a week or two, but spoke far from confidently on this subject, one great feature of the case being that all her symptoms were aggravated in paroxysms; *i. e.* for days together her command over her limbs and her sight would fail her to a greater extent than usual, and then she would recover up to a certain point, beyond which she never got any better; the pain in the head and the sickness also recurred in fits with very variable intervals. Her mental powers were not much impaired; when at her best her memory was not at all affected, but at other times she was dull, and more or less unable to pay attention.

Soon after her admission the back of her head was shaved, and two or three blisters were applied to the occiput one after the other. No other at all active treatment was had recourse to.

She remained in the hospital for about two months without any material alteration taking place in her condition. While there she suffered less from pain in the head than she had before, and she was not sick once, but she was quite unable to pursue any ordinary occupation. She could not sew, for her hands and arms shook so that she could not help pricking her fingers with the needle; she could not get about, for she staggered so that it was dangerous to let her walk alone; and she could not see to read even large type, though she was as yet

able to distinguish persons and large objects about her. She was very good-tempered and docile, doing what she was bid as well as she could, and with alacrity, but eagerness to do anything neatly seemed materially to lessen her power of doing it; thus, when desired to turn over the leaves of a book, and watched, the general tremor and irregular movements of her hand were much increased.

She was a robust, healthy-looking child, and, when perfectly still, there seemed to be nothing remarkable in her, excepting the rather unintelligent stare; but directly she began to move, her appearance was strikingly uncouth and awkward. Even her speech, when she began to talk, was somewhat peculiar; there was some impediment, some difficulty in getting her words out, as if the tongue were affected, certainly to a less extent, but in exactly the same manner as her limbs. During all the time she was in the hospital the functions of organic life were naturally performed; her bowels were open with tolerable regularity without medicine; the urine was natural in quantity and quality, except that it occasionally contained crystals of oxalate of lime; and she slept and ate well. Sensation was not at all impaired. She left the hospital neither better nor worse than when she came in.

In reference to this case, Dr. Todd remarked that, in his opinion, the principal symptom to be regarded, so far as diagnosis was concerned, was the inability to properly direct her voluntary movements. This symptom was the first to make its appearance, and from the first had been constantly present. Existing for so long a period, and though not evidently varying from day to day, yet slowly and surely increasing, it might be regarded as an indication of organic change, and, he thought, afforded the only clue by means of which any exact knowledge as to the disease could be arrived at. Whatever the cause was, it did not appear to be inflammatory. The disease certainly was not chorea; when at rest there was no inability to keep still; no involuntary jactitation, or even twitching of the limbs, but merely a wavering incoherence in her movements when doing what she wished to do. The girl had twice had an epileptiform seizure, *i. e.* she had twice suddenly lost her consciousness and fallen, and had remained perfectly insensible each time for some minutes. Still the case was very far removed from one of ordinary epilepsy, and though not much like the state of drunkenness, inasmuch as the will and the knowledge of what was right remained entire, the condition of the child yet resembled that state more than any other with which it could be compared.

Indefinite pain in the head, even though at times violent, and sickness, are, he said, such usual accompaniments of any brain disease, that they give necessarily no information with respect either to its nature or its seat. Even the blindness in this case Dr. Todd was inclined to look upon as a secondary result, and not as being in itself any essential effect of the original disease. Not so, however, with the principal symptom, the loss of the power of co-ordination: this he regarded as directly pointing to the cerebellum, and he expressed his conviction that the seat of the lesion was here, and most probably in or very near the median line, for one side of the body was not affected more than the other, which is so commonly the case where the cause itself is strictly one-sided. Probably there was some tubercular deposit pressing upon and gradually causing the destruction of the nervous substance. Certainly the morbid change was chronic, but as to its exact nature there were no grounds for the formation of a decided opinion. The child came of healthy parents, the rest of the family were healthy, and there was no indication of organic disease outside the cranium.

In July 1850, the girl came again under the care of Dr. Todd, who saw her at her own home. In the interim she had had blisters applied to the back of the head so as to keep the surface discharging for two or three months. She had had a seton in her neck, and had been moderately cupped twice on the back. This treatment had been utterly unavailing in stopping the progress of the disease, and in restoring sight, and had been left off for three months.

She was very much worse than when she left the hospital. She had lost the command over her limbs to such an extent that she was quite unable to walk, or even stand upright without assistance; she could see nothing; she was sick daily three or four times a-day, and the pain in the head was very frequent and very severe. In fact, she had now the same symptoms as before, very much increased in urgency, but in addition to these she suffered from habitual and obstinate constipation, and had for many months been subject to what her mother called fainting fits. She had often two or three of these a-day, very rarely passing a day without one: in them, without any regular convulsion or distortion of countenance, she trembled all over; she was quite unable to speak or move, but she declared that she did not lose her consciousness; her neck seemed to become rigid, her head being thrown rather back: they lasted for a minute or two; were not accompanied by any foaming at the mouth,

nor by any difficulty of breathing, nor even by any congestion of the face, but after recovering from the fits, her neck, and chest, and shoulders, would be covered by large erythematous patches, which lasted for many minutes, sometimes for half an hour. She had also a frequent desire to pass water, and would, so often, for many minutes at a time, make fruitless efforts to do this, that her mother was obliged to leave her quite alone in this respect, and the urine was invariably passed under her in the bed, so that none could be obtained for examination.

She had grown considerably during the year, and her head, which seemed to have increased disproportionately to the rest of her body, was flattened at the top, and was large, round, and prominent anteriorly. Her memory was in a great measure gone.

The muscles of the limbs were somewhat wasted, but she was not at all emaciated. The pulse varied between 64 and 106, and would often fall 24 beats after the sickness, which came on very suddenly without any warning or preceding nausea. The pupils were dilated to the very extreme, and were much less contractile than before, but they did move when a candle was held close to her eyes, and she was then just conscious of a sensation of light.

The treatment was principally aimed at the constipation, and the sickness, which annoyed her and her friends very much; and these symptoms sometimes seemed to be relieved, but often were wholly unaffected by the usual remedies, and they continued till the time of her death, which took place early in January 1851.

Post-mortem examination made 13th of January, 1851. — The bones of the skull were thin; the parietal and coronal sutures being loose. The membranes were quite healthy; there was no sub-arachnoid effusion whatever. The convolutions were much flattened; the brain evidently fluctuated on gentle pressure being made. When cut into, the cerebral substance was found to be firmer than natural, and had evidently been compressed between the bones and the fluid in the lateral ventricles, each of which was enormously dilated, and contained at least six ounces of clear yellowish serum.

The *iter à tertio ad quartum ventriculum* was greatly distended, so as to admit easily the little finger.

The fourth ventricle was filled with a cyst composed of a soft material resembling in appearance that which forms the wall of an hydatid, but much softer and thicker, and very much more easily broken down. The cyst was lined with a very vascular membrane, and contained about three ounces of bloody fluid. Both the pons and

the median lobe of the cerebellum between which it lay had a very flattened appearance. In the right lobe of the cerebellum, very near the crus and posterior to the cyst, was a hardened mass, which could be distinctly felt through the healthy structure in which it was imbedded; it was as large as a small walnut; a piece of it was easily squeezed flat between glasses, and it was very easily cut with a knife; it was not tough, but very much firmer, and of a much darker colour, than the nervous matter around it. Under the microscope, it was seen to be made up of ordinary nerve-fibres, and vesicles, and great numbers of irregularly-shaped transparent crystals of carbonate of lime, which seemed to be deposited in the meshes of the nervous web. No distinct line of demarcation could be drawn between the healthy and diseased parts, they seemed to run one into the other, the centre of the mass being very little if at all firmer than the outer part.

The real nature of the tumour in this case was not easily made out, and the microscope did not afford much assistance in investigating its structure. The walls were composed of a thick layer of pulpy matter in which many nerve-fibres were seen ramifying, but what relation these bore to the surrounding cerebral matter could not be determined. The pulpy matter appeared to be made up entirely of large cells varying much in size, of a more or less circular form, and for the most part filled with oil-globules. The fact of the cyst being lined by a very vascular membrane is highly interesting, and would almost seem to show that it was a true secreting cyst, which may perhaps have been originally developed in the cellular tissue which accompanies the *venæ Galeni*.

Whatever may have been the nature of the tumour, it is evident from its situation that it must have exerted considerable pressure upon the *crura cerebelli*, the only channels through which the influence of the cerebellum can be conducted. And if the cerebellum be considered as the seat of the co-ordinating power (and there are many reasons for entertaining such an opinion) we have thus afforded an explanation of the primary feature of the disease, the inability to govern the movements.

It is also evident from the situation of the tumour that pressure must have been exerted upon the veins (the *venæ magnæ Galeni*) sufficient to cause great obstruction to the return of blood from those parts of the encephalon in which they have their origin: and in this manner the great dropsy and distension of the ventricles may be accounted for. In reference to this point, Dr. Todd remarked that it was not generally recognised how very frequently a pressure of this kind was the cause of

intra-ventricular effusion, but the post-mortem appearances as well in this case as in several others of a somewhat similar nature which he had seen, and in many cases of serofulous hydrocephalus, led him to believe that dropsy of the ventricles resulted in the majority of instances from some mechanical impediment to the circulation.

It was to the pressure exerted by the continually increasing fluid upon the optic thalami and neighbouring parts that Dr. Todd referred the blindness, impairment of memory, &c.

The hard mass found in the cerebellum adjacent to the large tumour or cyst, appeared to have its origin in the nervous matter, for it was intimately connected with this on all sides (while from the walls of the large tumour the cerebral matter could be easily detached). It is well known that deposits of carbonate and phosphate of lime are invariably found in the pineal gland after the age of 8 or 9, and Dr. Todd said that it is not very unusual for similar deposits to be formed in different parts of the brain in morbid states of nutrition, as if there were a general proneness to the formation in the midst of the nervous substance of a crystalline matter, the deposition of which is in one part (as the pineal gland) of ordinary and natural occurrence.

That tubercular deposits may exist in the brain without giving rise to any recognisable symptoms is certain from the fact of their having often been found after death preceded by only a few days' or even hours' illness, while from their size they must have taken some months at least to accumulate. Many such cases are recorded in Abercrombie's book, but whether such a deposit as this was could take place in the *crus cerebelli* (a part of the brain where one would suppose such a deposit would be peculiarly likely to hinder the due performance of function) without causing any obvious derangement of health may well be questioned, and yet it is difficult to set down as its result any symptom which may not more satisfactorily be accounted for by the presence of the larger tumour or of the effusion into the ventricles.

The difficulty and pain which the patient had in regard to the urine is an interesting fact, for there did not appear to be any disease of the bladder or the kidneys.

HÔPITAL DE LA CHARITÉ, PARIS.

Case of Idiopathic Paralysis—Galvanization by M. Duchenne's Apparatus. Under the care of M. BRIQUET.

A WOMAN, aged 55 years, of a deteriorated

constitution, with the external aspect of sufferings, and extremely emaciated, affirmed, nevertheless, that her health had always been good. She stated that she had not had any attack of illness during her childhood; she had been vaccinated, but had not had small-pox or any other eruptive fever; menstruation had been established at the age of thirteen with facility, and had continued regularly up to the age of fifty-two, when it had ceased without any derangement of the health. Her present malady had existed only three years. She had married at seventeen years of age, and had borne a child in the following year; this child, as well as two others, she had nursed herself. Her character had always been calm and placid; she affirmed that she had always perfect self control, that she had never experienced any vivid feelings either of joy or sorrow; her trade of mercery had always been good, and for many years she had been the lighter of the wax candles at the Church of St. Merry.

About five weeks ago, without any apparent cause, she had experienced headache, lassitude, and chilliness, with sense of tingling in the toes of the left foot. The last-mentioned symptom, at first only occasional, had become permanent, and was accompanied by prickings, &c. as of pins and needles; they had gradually extended from the toes up the entire limb; they were so severe and painful that the patient could not put her foot to the ground, and at night the acuteness of suffering prevented her sleeping. The limb continued in this condition for nine days, when the symptoms disappeared, and were replaced by complete paralysis of the extremity; neither sensation nor motion of the limb remained. The general health had not been impaired.

When admitted into the hospital on the 21st of April, the size of the two limbs was the same, but the left was sensibly colder than the right; there was entire absence of pain or of sensibility; the skin was pinched, pricked with pins, &c., and the patient was unconscious thereof; any movement of the limb was an impossibility. The coldness and insensibility of the limb ceased exactly at Poupert's ligament. A blister was applied without producing any benefit. M. Duchenne, of Boulogne, at M. Briquet's request, subjected the limb to the galvanic current by the means of his ingenious apparatus. At first the patient felt nothing, but after a few moments she experienced the disagreeable pricking sensations which usually accompany the action of galvanism. In one or two minutes more, slight muscular twitchings were perceived, sensibility returned, and the muscles began to contract energetically. This sitting was con-

tinued for about fifteen minutes, and when it was terminated, the patient, to her great surprise, could raise her leg; she could even put her foot to the ground and make a few steps. Several hours afterwards, instead of the usual coldness of the limb, it became hot, "as if in a fever," (to use her own expression). The amendment continued, and by the 29th of April, the patient could walk as well as before the attack of paralysis, which seemed to have passed away as a dream; she could scarcely believe that her limb was restored to a perfect state, and was as vigorous as the right.

The interest and importance of this case do not need to be much enforced; they are obvious. The pains, so acute, had gradually invaded the entire extremity, and were succeeded by complete paralysis of all its functions, and this dating upwards of a month; all were dissipated, as by enchantment, by the local application of the galvanic current.

But, if it be asked, what was the nature of the paralysis? the question is not so easy of solution. The paralysis, it was clear, was not the result of cerebral hæmorrhage; the history and condition of the patient excluded the probability of inflammation of the spinal cord; it was not paralysis from lead poisoning; it was not hysterical, for the patient had never during her life been the subject of hysteria, and her age precluded the idea; it was not the paralysis of muscular atrophy, for both limbs were alike as to size.

What, then, was this paralysis?

M. Duchenne has taught us that there exists in the muscular fibre a special property, to which he has given the name of *motor aptitude* or *motility*. This *motor aptitude* is the power which the muscles have of acting under the influence of cerebro-spinal excitation. Many causes may impede or arrest its exercise; *e. g.* the prolonged suspension of muscular action by suspension of the central nervous influence, the hysterical state, and hyperæsthesia of the muscular nerves, may induce paralysis of muscles.

M. Duchenne has demonstrated the real existence of this property of muscles. Observing the different phases of paralysis, consequent on cerebral hæmorrhage, he had remarked that during the first months, while the paralysis was symptomatic of the cerebral lesion, electro-galvanism exerted upon it no influence. When, however, absorption of the effused blood has taken place, and the cerebral influence can be transmitted to the muscles, galvanism shows that the paralysis is seated in the motor organs themselves, that the contractibility of the latter is suspended only through the interruption of the central

nervous influence, and that their functions can be restored by galvanism.

This special property of muscles is distinct from the *irritability* of Haller, and must not be confounded with it, inasmuch as, observes M. Duchenne, we sometimes see the irritability retained and the motor power lost; sometimes the motor aptitude exists in all its integrity when electro-galvanic contractility is wholly or partially lost. The cure of lead palsy, without any modification of the muscular irritability, proves that the latter is not indispensable to muscular movement, and reveals the existence of another agency by which the muscles are susceptible of the electro-spinal agency, viz: *the motor aptitude* of the muscular fibre.

The application of these facts to the consideration of the above-related case, leads to the admission of the opinion of M. Duchenne, that the seat of this paralysis was in the organs themselves; not that the structure of these was in any degree altered, but that it was, in the words of M. Duchenne, simply a case of *idiopathic organic paralysis*; that it resulted from a loss of power dependent on previous hyperæsthesia, and that the stimulus of galvanism was required to restore the lost aptitude. Herein was the secret of the apparently marvellously rapid cure.

To the preceding case, Dr. Eugene Guibout appends another of a similar character, that occurred in the Hôtel-Dieu, under the care of M. Honoré, in 1848. In this patient paralysis of the lower extremities had existed for two years, during which period she had been confined to her bed, and had submitted to various energetic treatments without any benefit. The first application of galvanism produced some amelioration, and after seventeen sittings she was restored to health, and had lost all the symptoms and derangements of general health under which she had suffered for eight years previously. The paralysis in this case, as in the preceding, was essentially *idiopathic and dynamic*, for which no known treatment is so efficacious as local galvanization.

Medical Trials and Inquests.

LIVERPOOL ASSIZES.

CROWN COURT—(Before Mr. Baron Platt.)

MEDICAL EVIDENCE IN CASES OF INFANTICIDE.

ANN SHAW, aged 27, was indicted for the wilful murder of her child at Ashton-under-line, on the 15th of last June.

Mr. Joseph Pollock and Mr. Milward

prosecuted, and Mr. Monk, defended the prisoner.

The prisoner lodged with a woman named Fogg, who lived at Lees, near Ashton, and earned her living by washing. She had had a child in Ireland about two years ago, and was accused by her sister, who lived near her, of being again in the family way, which she denied. On Sunday, the 15th of June, a newly-born child was found a few hundred yards from Mrs. Fogg's house, wrapped up in brown paper, and covered with bed-ticking and a piece of print. The child was dead, *a thin cord was tied round its neck; its feet were tied up to its neck, and it was doubled up like a ball.* It was taken to a surgeon named Elliott, who made a post-mortem examination of the body, and who came to the conclusion that the child *had been born alive, and that the cord round its neck had caused strangulation.* The police, receiving this information, made inquiries in the neighbourhood, and suspicion attached to the prisoner, who was apprehended and examined by a medical man. The surgeon was of opinion that she had been delivered of a child, but he could not say how recently. The prisoner's room at her lodgings was then searched, and in her box some brown paper was found, and also some bed-ticking and a piece of print, which corresponded with the bed-ticking and the piece of print found covering the child. Some marks were also found in the box, which led to the conclusion that they might have been caused by a newly-born child having been laid in it. The clothes of the prisoner were produced to show that she had given birth to a child; but the medical gentleman called to give evidence could not state positively that these marks might not have been produced by another cause.

The learned counsel who addressed the jury for the defence of the prisoner, contended that there was no proof that the prisoner had given birth to a child, or that the child found was hers if she had, or, if the child found were hers, that she had murdered it. *All the appearances found on the child, he contended, were consistent with its having been born dead.*

His Lordship having summed up the evidence,

The jury found the prisoner *Not Guilty.*

Medical Intelligence.

THE CASE OF MR. DYCE SOMBRE.

THE question respecting the alleged *lunacy* of this unhappy gentleman has been put at rest by his decease, which took place on the 30th of June last. He came to this

country to submit himself to a medical examination as to the state of his intellect, but soon after his arrival was seized with an illness which terminated fatally.

We shall probably hereafter submit to the profession a summary of the law proceedings and evidence given for and against the insanity of Mr. Dyce Sombre, from the pen of a gentleman well acquainted with Asiatic manners and customs, and who not only has a full knowledge of the facts, but was personally acquainted with the deceased before and subsequent to these proceedings. Few medical men conversant with Asiatic manners and customs would feel themselves justified in arriving at the same conclusions as those who examined the case of this truly unhappy man. Amongst his personal friends in England and India, there is a strong feeling on this subject; and there is an impression that law proceedings and *injudicious* opinions did much to accomplish what was at first only a national or indigenous constitutional weakness, in regard to a freedom of intercourse between the sexes in European society. It should be borne in mind in such cases as this, that much allowance should be made for his early prejudices and habits, and whether there was cause or not for suspicion on his part. His Oriental prejudices ought to have been consulted and more maturely considered.

QUESTIONS FOR THE EXAMINATION OF CANDIDATES FOR THE DIPLOMA AT THE GRANT MEDICAL COLLEGE, BOMBAY.

APPENDIX A.—28th March, 1851.

First Examination—On Medicine.

1. Distinguish the treatment of inflammation of the contents of the cranium from that of Delirium Tremens, and show how remedies applicable to the one disease are inapplicable to the other.

2. State the different effects of Tartarized Antimony, Mercury, and Nitrate of Potash, when prescribed in acute inflammation.

3. With what pathological conditions is blood in the sputa connected?

4. Mention the various proximate causes of jaundice, and describe the symptoms which arise from the passage of gall-stones; likewise state what is the principal constituent of bile, and what of biliary calculi.

5. State what are the principal abnormal conditions of the urine, and how they are distinguished.

6. Enumerate the varieties of colic. Explain the causes and treatment of each.

JOHN M'LENNAN,
Government Examiner.

APPENDIX B.—29th March, 1851.

Second Examination—Surgery.

1. What are the immediate, and what the consecutive, bad effects of concussion

of the brain, when severe; and what is the treatment of such an injury in its various stages?

2. When an aneurismal tumour in the lower extremity is rapidly formed, yet causes no immediate risk to life, ought it to be operated for immediately, or should some delay be allowed to occur? State the reasons for or against the immediate performance of the operation, and mention from which line of conduct, in a speedily developed aneurism, most success might be reasonably expected.

3. Describe the difference of practice, as to performance of amputation in the case of gangrene in a limb, between the gangrene arising from constitutional causes, and that arising from external injury. Enumerate the kinds of injuries of limbs which would be likely to be followed by traumatic gangrene.

4. When the urine cannot be voided through the natural passage from the presence of stricture, what operations may be necessary for drawing it off; and what are the reasons which would induce you to give the preference to one mode or to another?

5. What are the peculiarities of congenital hydrocele—what its occasional complications—and what its treatment?

6. Mention the circumstances necessary to be attended to in the use of chloroform in surgical operations, and the cases in which its use is contra-indicated; with the reasons for its inadmissibility. Independently of cases connected with operations, enumerate some other surgical cases in which advantage may be derived from the induction of anaesthesia by the inhalation of its vapour.

JOHN M'LENNAN,
Government Examiner.

APPENDIX C.—4th April, 1851.

Third Examination—Midwifery.

1. Name the contents of the uterus towards the end of pregnancy, in an order beginning from its parietes.

2. What are the symptoms, causes, and cure of retroversio uteri?

3. What are the causes and treatment of uterine hæmorrhage, before and after delivery?

Medical Jurisprudence.

1. Describe the symptoms of poisoning from Opium—differences of its action as modified by age, and the treatment to be followed in a case of poisoning from this cause.

2. What are the diagnostic symptoms of chronic poisoning by Lead?

3. What is the strength of the Acidum Hydrocyanicum dilutum of the London Pharmacopœia, and what of that called

Scheele's Acid? What would be the best treatment for an overdose?

4. What are the native names for Nux Vomica and Datura Stramonium? What peculiar symptoms are produced by an over, or poisonous, dose of each? And what is the difference between the parts of the cerebro-spinal system on which each poison is supposed chiefly to act?

JOHN M'LENNAN,
Government Examiner.

BOOKS & PERIODICALS RECEIVED

FOR REVIEW

DURING THE LAST THREE WEEKS.

The Anatomy and Diseases of the Prostate Gland. By John Adams, F.R.C.S. Surgeon to the London Hospital.

The Spine: its Curvatures and other Diseases. By Charles Verral, M.R.C.S.

Memorials of John Mackness, Esq. M.D. By the Author of "Brampton Rectory."

The Parent's Dental Guide. By William Imrie, Dental Surgeon. 5th edition.

Lectures on Clinical Medicine.—The Microscope as a means of Diagnosis, &c. With Woodcuts. By J. H. Bennett, M.D. &c. No. 5, July 1851.

Monthly Journal of Medical Science. Edinburgh, September 1851.

Comptes Rendus. Nos. 4 et 5, 28 Juillet et 4 Août.

AMERICAN PUBLICATIONS.

The New York Register of Medicine and Pharmacy. By C. D. Griswold, M.D. No. 8 (Vol. 2).

The Medical Examiner and Record of Medical Science. By Drs. Smith and Biddle. Philadelphia, July and August 1851.

Boston Medical and Surgical Journal. July and August 1851.

The American Journal of the Medical Sciences. July 1851.

British American Medical and Physical Journal. August 1851.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 29.79
" " " Thermometer^a 56.4
Self-registering do.^b Max. 78. Min. 39.5

^a From 12 observations daily. ^b Sun.

RAIN, in inches, .74. — Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 1° below the mean of the month.

BIRTHS & DEATHS IN THE METROPOLIS During the Week ending Saturday, Aug. 30.

| BIRTHS. | | DEATHS. | |
|-----------|-----|-----------|-----|
| Males.... | 702 | Males.... | 560 |
| Females.. | 699 | Females.. | 501 |
| 1401 | | 1061 | |

CAUSES OF DEATH.

| | |
|--|------|
| ALL CAUSES | 1061 |
| SPECIFIED CAUSES | 1157 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 378 |
| <i>Sporadic Diseases, viz.—</i> | |
| 1. Dropsy, Cancer, &c. | 40 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 94 |
| 4. Heart and Bloodvessels. | 38 |
| 5. Lungs and organs of Respiration | 77 |
| 6. Stomach, Liver, &c. | 69 |
| 7. Diseases of the Kidneys, &c. | 8 |
| 8. Childbirth, Diseases of Uterus, &c. | 4 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 7 |
| 10. Skin. | 1 |
| 11. Premature Birth | 34 |
| 12. Old Age | 43 |
| 13. Sudden Deaths. | 6 |
| 14. Violence, Privation, Cold, &c. | 32 |

The following is a selection of the numbers of Deaths from the most important special causes:

| | | | |
|--------------------|-----|-------------------|-----|
| Small-pox. | 17 | Convulsions. | 32 |
| Measles. | 18 | Bronchitis | 29 |
| Scarlatina | 20 | Pneumonia | 30 |
| Hooping-cough | 26 | Phthisis | 121 |
| Diarrhœa. | 174 | Lungs | 6 |
| Cholera. | 28 | Teething | 11 |
| Typhus. | 54 | Stomach | 6 |
| Dropsy | 15 | Liver | 16 |
| Hydrocephalus | 22 | Childbirth | 0 |
| Apoplexy | 17 | Uterus | 4 |
| Paralysis | 17 | | |

REMARKS.—The total number of deaths was 20 below the average mortality of the 35th week of ten previous years.

Of the 28 persons who died of cholera, it is shown that 10 were 28 years of age or upwards; the remaining 18 were, with only one exception, infants under 1 year. With reference to the 10 adults, the illness (inclusive of previous diarrhœa in those instances where it is stated to have existed) lasted in one case 12 hours, in one 34 hours, in two cases 3 days, in one case 5 days, in one 6 days, in one 7 days, in two 8 days, and in one 23 days. Of the two cases of shortest duration, one occurred amongst the Greenwich pensioners, and another, described as "Asiatic," in Herbert Street, Hoxton.

NOTICES TO CORRESPONDENTS.

Mr. W Craig.—It was necessary to set up the whole of the paper at once: this created a little delay. Our correspondent has no doubt received a proof ere this. The paper will be inserted forthwith in three parts.

Mr. James Dickinson's Case of Epilepsy occurring with Labour shall have insertion.

The Address on Orthodox Medicine has reached us, and will be noticed.

We are obliged to Dr. G. Robinson for his letter. The report shall be inserted, and a proof forwarded as usual.

The communication of Observator is on a very important subject, and shall receive our attention.

We have also to acknowledge the receipt of communications from Dr. Julian Chabert, of New York—Mr. Parker—and Mr. Watson.

CORRIGENDUM.—Dr. Macgregor's Cases in Clinical Medicine.—In our number for Aug. 22, page 336, col. 2, line 8, for "18 stones," read "24 stones."

Lectures.

CLINICAL LECTURE

ON

TWO CASES OF GOUT

(Delivered at King's College Hospital, Nov. 26th, 1850.)

BY R. B. TODD, M.D. F.R.S.

Physician to the Hospital.

[Reported by LIONEL J. BEALE, M.B., Medical Associate of King's College, London.]

LECTURE XXIV.

TWO CASES OF GOUT.—First case—*use of beer as a cause of gout—frequency of gout in England as compared with its rarity in Ireland, Scotland, and on the Continent, due to the habitual use of beer—classes of hospital patients who suffer from gout—hereditary nature of gout—sudden mode of accession of the attack—changes which the attack of gout causes in a joint—contrast of gout with rheumatism—metastasis—a true metastasis in gout—not in rheumatism—the tendency to metastasis greatest in asthenic gout. Treatment—local treatment—blisters—colchicum—cautions respecting its use—state of the tongue a valuable prognostic index.*

GENTLEMEN,—We have at present two interesting cases of gout under treatment in the hospital, which will furnish material for some remarks on that disease. One is a case of gout in a very common form, and well represents the usual course of an attack; the other exhibits the disease in a very aggravated and serious aspect; and both afford good illustration of the most interesting points in the clinical history and the pathology of the disease.

CASE I.—In the first case, the patient, William Fountain, æt. 54 (v. xxxi. p. 142), is a baker, who, although not very intemperate, has been in the habit of taking his full allowance of fermented liquor in his time; he lives well, and admits that he usually takes two or three quarts of porter a-day, to say nothing of a little gin. Now I refer particularly to this feature in his history, because I have no doubt that it is to this habit of drinking beer freely that he owes his gout. Most persons who indulge much in beer or porter suffer sooner or later from this disease. Malt liquor is *par excellence* the pabulum of gout, for two reasons—because its chemical composition is favourable to the formation of lactic acid and its compounds, and also because people, who are fond of it, drink it in large

and unmeasured quantities at their meals and between their meals, and by taking it freely with other food they derange the primary assimilation, and thus damage all those secondary processes concerned in nutrition. This explains why it is that we meet with so much more of this disease in the English hospitals than in those of other countries.

In England malt liquors are in common use among all classes of the population, high and low; it is drunk very largely by the labouring classes, especially those in large towns, and in particular by those whose work is very laborious and trying to the constitution, and who on that account receive good wages, and therefore can afford to supply the waste caused by their great exertions by means of liberal potations of a fluid at once stimulant and nutritious like beer. Hence it is that we very commonly find coal-heavers, bakers (like our patient Fountain), brewers' draymen, and others of the labouring classes, inmates of the London hospitals, suffering under gout in its various forms. There is another class also who can scarcely be said to labour, who are sometimes admitted for this malady; namely, butlers or house-servants of wealthy families, and coachmen.

It is remarkable that in Ireland and Scotland gout is a disease almost confined to the better classes of society, and that it is rarely, if ever, seen in hospital practice. This is because beer is but little used by the lower orders. In such towns as Dublin and Edinburgh there must be a large portion of the working classes well paid, and therefore well fed; but porridge, potatoes, fish, and bread, are the chief sources of their sustenance, meat less frequently, and whisky is their stimulant; and these kinds of food do not generate gout unless taken in very large quantities, and in habits already tainted with the disease by inheritance.

For the same reason, in France and Germany (excepting in the beer-producing Bavaria), gout is by no means common; and the meagre accounts to be found of this disease in foreign works show that the authors have not had much practical acquaintance with its characters.

I need not remind you that gout is one of those maladies which are pre-eminently hereditary; that a son will inherit it from his father or mother, and, what is more curious, from grandfather or grandmother, the intervening generation being free, or nearly so. Such *inherited* gout is frequently most obstinate and difficult to eradicate, the gouty diathesis being more fully developed than when it has been acquired. It is, therefore, well to inquire into this point in the history of such patients as

come before you. In the present instance, fortunately for the curability of the disease, and unfortunately for the *respectability* of our patient's gout, we cannot make out any pedigree,—it owes its origin to that ignoble source, *beer*.

Fountain's first attack of gout came on ten years ago—that is to say, it did not develop itself in any paroxysm until that time, although he had often suffered from flying pains about the joints, indicating the development of the gouty diathesis,—so that he had reached the age of forty-four before he had his first attack. This first attack came on suddenly: having gone to bed well, he was awake in the middle of the night with violent pain in the right great toe, followed in a few hours by redness and swelling; from this he recovered in a few days, and his second attack did not occur for another year; this was more severe than the first, and affected the foot as well as the toe. His present attack came on about five days before his admission; the patient having suffered from headache, giddiness, and nausea, for a few days previously.

Now this history is very deserving of your attention. It is just that which we get in a large proportion of the cases of gout,—the patient being, in point of age, about or beyond the meridian of 40, and accustomed to the daily use of beer to a greater or less extent, without anything of what might be called excess, but habitually taking a regular quantum of malt liquor. Under these circumstances a man becomes dyspeptic; as he advances in years he becomes less active in his habits of exercise; he suffers, perhaps, from headache and from flatulence, and the bowels act irregularly; his complexion becomes sallow, there is yellowness of the conjunctiva, and at the same time the urine is not secreted in its usual quantity; it becomes high-coloured, and prone to precipitate lithic acid or lithates. With all this there may or may not be a little local uneasiness, a little stiffness or discomfort about the great toe or instep, hardly amounting to pain, which perhaps the patient may disregard at the time, but still sufficient to call his attention to that part.

A patient suffering under these symptoms is undoubtedly, if he be a man of gouty habit, or if he inherit the disease, threatened with an attack of gout—in most instances; yet, if you tell him so, he will not believe you,—perhaps he will laugh at the idea that *he* is to suffer from gout; but in the course of the night, or towards morning, he awakes up suddenly, suffering from violent pain in the great toe or some other part of the foot. At first there is no redness whatever,—merely pain, which

soon becomes accompanied with a sensation of throbbing and enlargement about the joint; the pain becomes more severe, so that the patient dreads even the contact of the bed-clothes. This continues for some hours, or even for some days; then the acute pain diminishes, the redness and swelling subside, but the joint remains stiff for some time, in consequence of the thickening of the tendons and ligaments about it. The thickening is caused by a deposit in the fibrous structures about the joint, probably consisting of lithate of soda, the same salt as that which enters into the composition of chalk-stones, and perhaps, also, some phosphate and carbonate of lime. The more frequent the attacks of gout, the more the joint suffers; because each succeeding attack leaves a little deposit. The joints appear large and stiff, and the cartilage, as well as the ligaments, and of course the synovial membrane, undergo a change in structure. Often a thin layer of lithate of soda, looking very much like a layer of plaster of Paris smeared over the cartilage, may be observed.

An interval of nine years elapsed between our patient's first and second attack—a very remarkable circumstance, as in general, after the first invasion, the attacks recur once annually, or even twice, generally in spring or autumn. This second attack took place only a twelvemonth ago. Like the first, it was characterised by the sudden invasion of pain in the great toe and side of the foot, the patient having previously suffered from headache and a feeling of nausea for some days before. The present attack came on only a few days before his admission.

Now you may fairly ask, why do you call these attacks gout, and not rheumatism? Rheumatism attacks joints, and causes swelling and great pain: how are we to distinguish between the rheumatic and the gouty attack? The points which would lead you in this case to the conclusion that the disease is gout, are these:—the age of the patient—his diathesis—his habitual use of malt liquor—the rapid or sudden way in which the attacks came on—and the fact that the parts first affected were small joints, and especially that these were the metatarso-phalangeal joint of the great toe, and the tarsal joints, which are pre-eminently the favourite habitat of gout. Rheumatism is a disease affecting early life, while gout is generally met with in persons of middle or advanced age. The chances of acute rheumatic affections are very much diminished after the age of 40; while gout most frequently occurs at, and after this age.

This patient had none of those very

profuse sour-smelling sweats so frequently met with in rheumatic fever, and which are highly characteristic of it. You may perhaps have noticed a girl in Augusta Ward suffering from this malady; and although but two joints are affected, and those very slightly, yet she had this profuse sweating as a most prominent symptom. This tendency to sweat is never absent from rheumatic fever,—it is a more essential feature of it than the articular affection. It is not uncommon to meet with instances of fever with profuse sweating and furred tongue, just as in rheumatic fever, without any articular affection, but perhaps with an inflammation of some internal organ. In this way pneumonia and pleurisy, but more commonly the former, often show themselves. The symptoms are fever, with full bounding pulse, and furred tongue, copious sweats, pneumonia or pleurisy, or both; and there may or may not be articular affection; sometimes the joints do not become affected till towards the end of the fever. In cases of gout, more especially when the gout is pretty general, and affects large joints as well as small—the rheumatic gout of some authors, or the synovial rheumatism of others—you may have sweats, but rarely the very profuse sweats of the true rheumatic fever.

I have referred to the suddenness of the invasion as characteristic of gout. This is a very remarkable feature of this remarkable disease. The invasion is, no doubt, in nearly every instance, to all intents and purposes, sudden to the patient; but, on a careful analysis of many of the cases, it will be found to be more apparent than real, and to arise from an extremely rapid development of a disease which had been insidiously creeping on for a longer or shorter time before. On close inquiry, circumstances will be brought to the patient's recollection tending to show that some disturbance of his system, or of one or more of his joints, may have previously existed. Practically, however, the invasion is sudden: a man goes to bed thinking himself well; he had been walking about for a great part of the previous day; in the middle of the night, or in the early morning, he wakes up with the severe pain of an attack of gout. Now this does not occur in articular rheumatism: never, so far as I know, does the rheumatic attack come on otherwise than gradually—first one or two joints,—those of the lower limbs generally,—then the upper ones.

And it is not an unimportant diagnostic guide to observe the joints first affected. In gout, in the vast majority of instances, those first visited are the great toe or the instep, or some other *small* joints. In rheumatism the ankles and knees are gene-

rally first attacked. It is certainly one of the most striking distinguishing characters between gout and rheumatism, that the former loves the small joints, the latter the large. But no practical man would allow that either may lay claim to the one or the other class of articulations as its exclusive habitat: what is not inaptly called *rheumatic gout*—but which, I think, may be more correctly designated *general gout*—attacks all the joints, even to those of the lower jaw. And so also in rheumatism, even in rheumatic fever, all the joints may be attacked, even to the small ones between the articular processes of the vertebræ. Thus it is that Nature, even in her abnormities, throws difficulties in the way of our attempts at classification and definition, just as the zoologist or botanist knows she does with reference to the objects of his study.

But I fear some of you will say, what a difficult matter it must be to decide what is gout, and what is rheumatism. I think, however, I can promise you that you will not make this remark when you have really studied and watched many of the cases. You will then see that the mode of invasion, the age of the patient, the absence or presence of profuse sweats, the history of previous attacks, and especially of the first, will generally serve as useful guides to lead you to a satisfactory diagnosis.

There is one feature of difference between the two diseases, of very great interest as regards both diagnosis and prognosis, upon which I have not yet touched: I allude to the liability in each to affection of the heart. This liability is greater and much more serious in rheumatism than in gout. In rheumatic fever you have, as you well know, the most exquisite examples of both pericarditis and endocarditis, so that a fearfully large proportion of the cases emerge from the fever with a damaged heart, an adherent pericardium, or an imperfect mitral valve, or both. In gout, these acute affections are among the rarest occurrences; yet, that the heart is liable to be *slowly* damaged, both in its muscular structure and in its fibrous tissue, all experience proves; and the well-known fact of the liability to irregularities in the heart's rhythm, which is so common with gouty patients, shows a marked proneness to cardiac affection in gout. What seems to me to be the prominent distinction between the cardiac affections of the two diseases is this—that in rheumatism there is a proneness to fibrinous concretions on the pericardium or the endocardium; in gout, the nutrition of the muscular structure suffers, and inorganic deposits (lithate of soda, phosphate and carbonate of lime) take place in the chordæ tendinæ and other parts of the fibrous tissue of the heart, which stiffen them, cause them to shrink, and

ultimately impair the efficiency of the valvular apparatus.

In both rheumatism and gout a tendency for the disease to shift from one place to another has long been recognised by practitioners; and hence the cardiac inflammations of rheumatic fever used to be regarded as *metastasis* from the external to the internal parts. Now this tendency to shift is most signally noticed in rheumatic fever, when particular joints seem in succession to be invaded by the rheumatic state; and then, indeed, there is much the appearance of a true metastasis,—to-day the left knee is affected, to-morrow the right knee, while the left knee has become quite or nearly well. But there is no metastasis in the cardiac affection, for the external rheumatism may remain unchanged, or may even become more severe, while the heart-disease is at its height, and frequently the cardiac disease comes on at first, and the articular affection afterwards.

In gout there is, on the whole, less tendency than in rheumatic fever for the disease to shift *from one joint to another joint*, but in this disease we have the most remarkable examples of true metastasis from an external to an internal part, or *vice versâ*. A man may have had at your visit yesterday well-marked gout in his instep, and at your visit to-day you find the instep nearly well, but he is suffering exquisite pain in the stomach. Or the disease may first show itself in some internal organ, and then attack one or more joints. Thus a gouty subject gets bronchitis or irritable bladder, and you find you make no progress in your treatment until suddenly the gout appears in the great toe or instep, when at once the internal affection gives way. We have nothing like this, at least so far as I know, in rheumatic fever.

I will not dwell now upon this interesting feature of gout, because I shall have to allude to it again in connection with the second of the cases which form the text of this lecture. I shall content myself here with stating—and you will excuse me if, for the sake of brevity, I do so somewhat dogmatically—that it is when rheumatism or gout is of the low or asthenic kind that this tendency to shift is most marked. And it is also most apt to occur when the patient has become asthenic under antiphlogistic treatment. Of this I have an interesting and to me conclusive proof, in my own practice. Formerly, when I used to bleed largely and purge freely, I found this tendency to shift much more common than of late years, when I have, to a great extent, abandoned the so-called antiphlogistic treatment as worse than useless in these diseases. I would impress upon you this dogma: an active antiphlogistic treatment creates asthenia—asthenia gives

to both rheumatic fever and gout what I may call *the shifting character*, which in both diseases is most perilous, but in the latter especially so; and when you find the tendency to shift already existing in a case, depend upon it that the asthenic condition of the patient is that which demands your earliest attention.

Of the Treatment.—I have referred you to this case of Fountain's as a good example of gout in a common form, and I may now allude to the treatment to which he was subjected in illustration of the plan which you will generally find most serviceable to your patients.

But let me *in limine* entreat of you to bear in mind, as an important feature of the clinical history of gout (very necessary to be kept in view in our attempts to form an estimate of the value of this or that plan of treatment), that the great majority of cases such as Fountain's—cases of sthenic gout, in men of good constitution—will get well without any very specific treatment. Suppose you take a hundred cases of gout, put them in bed and keep them warm, and especially keep the affected joint warm, take away their beer, and give them light, wholesome, and nourishing diet, you will find that of these hundred cases perhaps seventy will get well, without any unfavourable symptoms, in from three or four days to a fortnight.

Well: then comes the question, can we accelerate the cure by treatment? I believe that by moderate purgation, and by the use of diaphoretics, by keeping the joints warm, and, if the urine be very acid, by the administration of alkalies, we may to some extent expedite convalescence, and undoubtedly relieve pain. The best way to keep the joint warm is by enveloping it in a large quantity of carded cotton or cotton wool: you thus place the joint in a kind of local vapour-bath, which causes free sweating of the skin around it, and promotes likewise a general diaphoresis. It has this advantage over a general vapour-bath,—that you can more exactly limit its influence, and that it does not tend, unless carried too far and kept on too long, to weaken the patient. A general vapour-bath, although highly plausible in theory, is practically very objectionable, because, whilst you may hit off very exactly the precise amount of sweating desirable in one case, you will overshoot the mark in half a dozen.

Now a great advantage of this local treatment is, that in nine cases out of ten it relieves pain, and that pretty quickly. As soon as the joint has become thoroughly warm, and the sweating process is fairly established, relief is experienced.

I have satisfied myself by repeated trials that counter-irritation over the affected

joint is of decided utility in many cases, both in relieving pain and removing the effusions or thickenings which remain in gouty joints. This may be effected by the local application of mustard, or turpentine, or naphtha; but what I prefer, and use most frequently, is a *small* blister. It is important that the blister should be small,—large ones increase the articular irritation; they may vary in size, according to the size of the joint, from that of a sixpence to that of a half-crown, or, at the very largest, a crown-piece. Often you will find it good to apply mustard or turpentine for twenty minutes or half an hour before you apply the blister: you thereby accelerate the effects of the blister, and increase the quantity of serous discharge. You need not be deterred from pursuing this plan of treatment, even in the earliest stages: when the joint is most red, and looks most inflamed and excited, it succeeds admirably, provided always that you take care not to irritate or vesicate a large surface.

The application of leeches to a gouty joint is, in my opinion, much to be deprecated. I find it difficult to say why this is so, but I have so often seen joints weakened by this practice, that I have no hesitation in condemning it. There is no doubt that if you apply leeches to gouty joints you will relieve the pain pretty quickly, but you will leave a state of permanent weakness, from which the patient will be a long time in recovering. It will be for you to decide which is preferable,—to try and relieve pain quickly by a method which is at best uncertain, but which is pretty sure to leave a weakened joint; or, to adopt a method less rapid as regards relief of pain, but more sure as to ultimate effects. I confess I prefer the slower and surer method. As regards the blistering plan, I can very confidently state that I have never seen any bad effects from it when the blisters have been confined within the limits of size which I have mentioned.

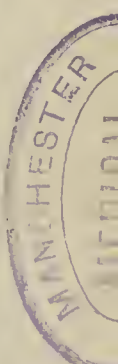
Well, now: many will say to you, you must use colchicum, and they will think you very unorthodox if you attempt the cure of either rheumatism or gout, but especially the latter, without the use of this drug. They hold, or act as if they held, that colchicum exerts a special influence over the morbid matter or other cause which gives rise to an attack of gout,—that it kills it, as it were, and bears the same relation to the gouty poison that quinine does to the paludal poison, or iodide of potassium to that of secondary syphilis. I am quite prepared to admit that colchicum bears some curious relation to gout, but I hold that that relation is sometimes one for good, and sometimes one for

evil; and perhaps you will be startled when I tell you that it appears to me that in the majority of cases that relation is one for evil. I have no doubt that in sthenic cases in young subjects it relieves pain, and hastens the removal of the paroxysm, but, at the same time, experience leads me to subscribe to a belief very popular among gouty patients, that if it shortens the duration of the attack, it likewise shortens the interval between the attacks. There is great danger of patients getting into the habit of taking colchicum in large and even in increasing doses, much as they would opium. Colchicum is one of those drugs of which the system gets very tolerant; and if, in a first attack, the patient take ten minims, in the second he will require twenty, in the third more, and so on,—just as an opium-eater requires continually increasing doses of his favourite drug. Indeed, you find confirmed colchicum-drinkers just as you find confirmed opium-eaters. I once attended a lady of high rank who had gradually accustomed herself to doses of the wine of colchicum, and which were measured, not by tens or twenties, but by hundreds of minims; and yet, such was the little influence of these large doses upon the essence of the disease, that her attacks became more and more frequent, her joints were horribly crippled, and her nervous system was fearfully shattered. I endeavoured to persuade her to leave off the colchicum, but without success; and she ultimately died in a state of extreme prostration,—due, as I believe, mainly to the inveterate addiction to this drug.

For these reasons I object very much to the too prevalent routine system of giving colchicum in gout, and I prefer trying to cure the paroxysm with out it. Those of you who constantly follow my practice know that I very rarely have recourse to it, and that my patients get well as quickly, and, I believe, more certainly, than if they had taken that drug. When I do use it, I generally give it in ten or fifteen-minim doses of the wine of the root, or in grain doses of the acetic extract.

Fountain took small doses of colchicum wine immediately on his admission, but without any very encouraging result. The gout, certainly, became much less severe in his feet, but while he was still taking the colchicum he was attacked with gout in his right knee. This not appearing to yield, the colchicum was discontinued, alkalies were administered, a blister was applied, and an occasional aperient was given.

The remedy which seemed to act with the most marked benefit was the blistering. On the 17th, the great toe, and dorsum of the foot on both sides, were extremely painful,



and swollen; and on the 18th, after the blisters had been applied, the pain had greatly subsided, and the swelling was much diminished; and on the 22d he was so much better that he was able to walk along the wards; on the 26th, however, while he was still taking colchicum, the right knee became painful and swollen.

Now we observed here a point which is worth your attention in reference to prognosis,—namely, that the tongue remained more or less coated as long as the general gouty condition had not materially abated. The feet had recovered, but the knee became attacked, and the tongue remained foul throughout; and when the attack in the knee came on, the tongue acquired an accession of fur, nor did it become clean for several days after; and we found that, as the tongue became clean, the convalescence advanced *pari passu*.

Thus, if you watch the tongue, you will find in it the best index to the increase or diminution of the constitutional disturbance which accompanies the gouty paroxysm. If it remain foul your patient is not safe, even although the local symptoms may have wholly or in part subsided; if it is clean, matters are going right.

The next case to which I propose to call your attention is remarkable for the enormous deposits of lithate of soda about the joints, and other interesting symptoms; but as I have already occupied a good deal of time with one case, I must make the other the subject of my next lecture.

CASE OF POISONING BY ARSENIC—ABSENCE OF PAIN—DEATH IN FIFTY HOURS.

THE following case occurred at the Birmingham Hospital, in the practice of Mr. Hodgson, and is reported in the *Provincial Medical Journal* of Sept. 3, by Mr. A. H. Paterson, of Altringham:—

Lucy H., married, aged 30; a fine healthy woman; admitted at 1 o'clock P.M., on May 26th, 1845. Her husband stated that, about an hour before, she had swallowed nearly a pennyworth of arsenic. She was in a profuse perspiration, her extremities cold, and her pulse small and quick. The stomach-pump was at once used, and a quantity of clear fluid and white curdy matter removed: this, on being tested, *was not found to contain arsenic*. The stomach was well washed out with warm water, and a quantity of hydrated peroxide of iron administered. She walked up stairs to bed. During the evening she vomited several times, and was thirsty; her pulse rose, but did not increase in quickness.

10 P.M.—Pulse full; *no pain in the abdomen, or at the pit of the stomach*, except under severe pressure.

May 27th.—Has vomited and been purged several times during the night, and suffered from great thirst.

9 A.M.—Looked pale and exhausted; complained of slight pain in the lower part of the abdomen, but she had *no pain* in any other part of the abdomen or *stomach*, even when very firmly compressed. At half-past 9 she left the hospital, at the desire of her friends. The pain in the bowels rapidly increased, was accompanied with vomiting and purging, and continued till her death, at half-past 1 P.M.

Post-mortem examination, 20 hours after death.—The body looked pallid; the features were composed; the heart large, and both ventricles filled with black half-coagulated blood. On washing it, the carnae columnae of both ventricles presented an ecchymosed appearance. Lungs healthy, much gorged with black blood. The stomach, on its lower external and anterior surface, presented *a few thin ecchymosed spots*, about the size of a split pea each. The great omentum and peritoneal surface of the intestines were of a light pink colour. On opening the stomach it looked dark, and its mucous lining was softened and thickened; on two places, about the size of a sixpence, near the greater curvature, it was abraded. The head of the duodenum was very dark, and its mucous folds extensively ecchymosed: it and the stomach were distended with a fluid of a light brown colour. The rest of the intestinal canal was normal in appearance, except a patch of redness and ecchymosis near the head of the caecum, and a number of white spots, each the size of a pin's head, in the folds of the mucous membrane of the ileum, the surrounding intestine being very vascular. The uterus and brain were much congested, but otherwise healthy. The white specks in the ileum proved to be arsenic.

* * This case presents some anomalous features. Although half an ounce of arsenic had been swallowed only an hour before the patient's admission, and there appears to have been no violent vomiting, yet the fluids of the stomach removed at this time by the pump yielded no trace of arsenic! The next circumstance worthy of note is the absence of pain from the region of the stomach, even on firm pressure. Thirdly, although 240 grains were swallowed, and the woman lived fifty hours, it does not appear that there was any inflammation of the stomach or bowels. The mucous membrane of the stomach is described as being softened and thickened, and that of the ileum as being vascular in small patches around some white specks, which were found to be arsenic.

Original Communications.

CASES IN
CLINICAL MEDICINE.

BY ROBERT MACGREGOR, M.D.,
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(Reported by his Clinical Clerk,
ROBERT PERRY, M.D.)

ALL the organs of the body, and most of its tissues, are more or less liable to become the seat of that malignant and fatal disease, Cancer.

The organs most frequently affected are the stomach, liver, mammary glands and uterus in the female, and testes in the male sex. Besides these it also attacks, though more rarely, the œsophagus, intestinal canal, tongue, lip, chin, lungs, kidneys, eye, brain, glands, &c. Among the tissues implicated we most frequently find the cellular, then the mucous and cutaneous, and next in order the osseous and vascular.

The variety of cancer which is more particularly to be the subject of consideration in the following pages is, that occurring in the stomach,—one of the most formidable diseases to which that organ is liable, both on account of the very distressing symptoms accompanying it, and of its very unfavourable results.

The symptoms which attend this affection at its commencement are of so general a nature, and differ so little from those of dyspepsia, and other disorders of the stomach, that it is frequently a very difficult matter to recognise it in its earlier stages, more especially when primary; and thus it is apt to be disregarded, as if it were a trifling complaint, or to be confounded with simple dyspepsia. It is of more frequent occurrence in males than in females, owing most probably to the different habits of life in the two sexes; the former, in general, indulging more freely in the use of ardent spirits, and being more frequently the subjects of mental distress, which appears in man to have a powerful influence over the functions of the organ in question. It is never met with before puberty, and seldom above seventy years of age;

occurs oftenest in males between the ages of thirty and fifty, and in females after the cessation of the menses.

The stomach may be either the primary or the secondary seat of the cancerous affection, most frequently the former. The disease then extends to the lymphatic glands in the neighbourhood, and from them to the liver, pancreas, colon, or omentum, &c. When it is only the secondary seat, the origin and order of extension are of course reversed. Or, thirdly, it may manifest itself as a secondary affection, though not extending from a neighbouring organ, but as if by metastasis, or subsequently to a similar disorder of a distant part of the body. The diagnosis will be much facilitated by the knowledge that cancer has previously existed in some other organ or tissue, or even in some other member or ancestor of the same family; as carcinoma is well known to be in some instances hereditary. In primary cases the diagnosis is by no means easy; and when the malady commences in some of the neighbouring viscera, and is afterwards propagated to the stomach, this organ may be extensively affected, without any marked symptoms to draw attention to it. It is surprising to what an extent the degeneration may go on in some instances, without producing any sensible effect on the patient's health; as is well illustrated by one in particular of the following cases, where the person had only been ill for less than three weeks before death, and where on inspection the most frightful mass of disease presented itself.

The symptoms, as has been already stated, are not of a very marked kind, and sometimes there are none at all during the whole course of the disease that can be referred to the stomach. Those which at times present themselves are principally as follows:—

A sense of pain or weight in the epigastric region, more especially after taking food, extending, after some time, to the back or loins, or as far as the thighs; accompanied by general uneasiness and languor, aversion to exercise, fretful temper, and an unnatural degree of sensibility to impressions, partial flushings of the face, acid eructations, and occasionally palpitations. In some instances there is great nausea felt, and the food is immediately vomited with much temporary relief to the pa-

tient. I have seen the presence of food cause such a burning heat in the stomach that the patient was regularly in the habit of tickling the throat with a feather to excite vomiting. In other instances there is no vomiting whatever, from the commencement to the termination of the illness, so that the practitioner is apt to be misled, and to be induced to believe some other organ the seat of the disease different from the true one. There is a very great variety in different cases as to the time at which the food is rejected. Sometimes it is immediately after having been swallowed, at other times not for an hour or more afterwards. The question naturally arises, upon what does this difference in time depend? The explanation generally given of this is, that the vomiting depends on a local obstruction to the passage of the ingesta, and varies according to the position of that obstruction. When the disease is situated at the cardiac orifice, pain and vomiting occur as soon as the food reaches the bottom of the œsophagus, but if any of the aliment passes beyond this it is retained. If the obstruction is in the body of the stomach, the food is not returned for a few minutes, and then generally brings along with it some of the gastric secretions. When the pylorus is the seat of the disease, the food is partially digested, and then rejected an hour or more after its introduction. This explanation is to a certain extent satisfactory, but not in every case, as vomiting occurs frequently where there is no mechanical impediment, and sometimes immediately on the entrance of the food into the stomach, although the obstruction be at the pylorus. When the pylorus is not constricted to such an extent as entirely to prevent the passage of food, the muscular coat of the stomach generally becomes hypertrophied, as a natural means of overcoming the difficulty; but in persons of weak constitution, dilatation of the organ, and sometimes of the cardiac portion of the œsophagus, takes place, with thinning of their coats; and after the distension has gone on as far as the stomach can bear, periodic vomiting sets in. After a time it may become so attenuated as not to be capable of contraction, and the coats are either ruptured, causing speedy death, or the patient dies from want of nutrition. In some instances the contraction of

the muscular fibres may be prevented by the scirrhus mass, or by the adhesions of the stomach to some of the neighbouring viscera, and thus the propelling power of the muscular coat be destroyed. Nausea and vomiting are at times present when no food has been taken, and when the stomach contains none. The matters then thrown up are various;—resembling coffee grounds, uncoagulated blood, or dark green offensive fluid. The bowels are at the commencement costive, requiring the constant use of laxative medicine, by which the patient is much relieved; but as the disease advances, diarrhœa comes on, which quickly wastes away any remaining strength. A tumour, or at least a slight degree of fulness and swelling, may in most cases be felt in the epigastric region, the presence of which ought always to be searched for, when the other symptoms manifest themselves, as it will often be discovered by the touch, long before it becomes apparent to the eye. Pressure over this tumour or the cancerous stomach gives very slight pain in the majority of cases, but I have seen at least two cases in which it caused most acute pain. From the tumour being sometimes situated over the aorta, and having the pulsations communicated to it, instances have occurred in which it has been mistaken for aneurism, but an accurate examination will obviate any liability to such a mistake. It must not always be looked for in the normal situation of the stomach, as that organ is often dragged very much out of its place, and turned round so as sometimes to occupy the situation of others, and lead the practitioner to think the enlargement in some other viscus.

The general or constitutional symptoms so much resemble those of other chronic intestinal diseases, more especially in the stomach itself, that the diagnosis depends very little upon them. The patient's health and strength gradually decline under the want of proper nutrition. Often he prefers rather to starve than to suffer the excruciating pain which the presence of food in the stomach occasions. His countenance then assumes a painful and anxious expression, and his skin becomes of that yellowish-grey colour peculiar to organic intestinal diseases, and arising from the state of anæmia to which the body is reduced. At this time the

urinary bladder frequently becomes irritable, and micturition painful and difficult, most probably owing to the effects of sympathy.

The diseases with which it is most liable to be confounded are, chronic ulcer of the stomach and dyspepsia; but since the treatment of each does not differ very materially, the mistake is not a serious one. Chronic ulcer may sometimes be distinguished by the greater pain which comes on after taking even the mildest food, no hardness or fulness being felt in the epigastrium, little redness of the tongue, and less effect on the general health of the patient. M. Valleix, in the *British and Foreign Medico-Chirurgical Review* for October, 1850, gives the following as the distinctive marks between gastralgia and cancer of the stomach:—

Chronic Gastralgia.

Vomiting at considerable periods after food.

Destroys slowly.

No signs of cancerous cachexia.

Progress irregular.

Cancer of the Stomach.

Vomiting at long periods after food.

Destroys rapidly.

Signs of cancerous cachexia.

Progress regular.

The existence of this disease having been determined, no hope of ultimate recovery can be held out, as, sooner or later, it must prove fatal. The length of time a patient may survive cannot be accurately foretold, as it differs in almost every case, and depends in a great measure upon his or her constitution, and, I believe, also on the species of cancer,—the medullary, as a general rule, spreading faster, and proving more rapidly fatal, than most other species. The termination of this incurable malady occurs in a variety of ways. Sometimes the cancerous mass breaks up, and induces a sudden and fatal hæmatemesis by the sudden erosion of a large blood-vessel; at other times death steals on in a more insidious manner, by slow hæmorrhage, or the general oozing of blood from the ulcerated surface. It is induced, also, by peritonitis occasionally, as a result of the perforation of the stomach and the discharge of its contents into the cavity of the abdomen. The symptoms which characterise perforation of this viscus or of the intestinal

canal then ensue—viz., a feeling as if something had given way in the belly; pain coming on suddenly, perhaps at first confined to one spot, but soon spreading from that all over the abdomen, and to the shoulder; sudden prostration of strength, or fainting; peculiar sunken appearance of the countenance; tympanitic distension of the abdomen; dyspnoea; quick and small pulse, &c., with an internal conviction of speedy dissolution. This termination is not of speedy occurrence, as it is more common for adhesions to be formed with the neighbouring viscera, and the perforation thus to be prevented. Still more rarely does it burst externally through the skin, though this is not an impossible circumstance. Diarrhoea, inanition, inflammation of the lungs, peritoneum, or liver, dropsy from pressure on the vena porta or vena cava, &c., are some of the other methods by which it may terminate fatally.

There are three principal varieties of cancer,—the fibrous, the medullary, and the areolar,—all of which are met with in the stomach. The fibrous is of most frequent occurrence, the medullary next, and, last of all, the areolar, which is but rarely observed; but the first two of these species—indeed, all the three—are found mixed oftener than separately. Dr. Williams divides it still further, and gives the following varieties:—Scirrhus, mammary, pancreatic, and solanoid sarcoma; fungus hæmatodes; and colloid or gelatinous cancer. He also states that “the varieties may for the most part be traced to different degrees of activity in the specific or cancerous matter, that may be stated to be the materies morbi, and to the varied changes in the new growth, and in the implicated textures, which this matter, thus differently active, can produce. Of these varieties it may be said generally, that scirrhus, and perhaps the mammary and pancreatic sarcoma, exhibit a chronic character, with less activity and tendency to increase locally, or to spread through the system; whilst the others constitute the more active forms of cancer, causing more rapid growth in the parts first affected, and more speedily appearing in other parts of the body.”

Cancerous tumours, viewed in relation to their minute anatomy, consist for the most part, according to Dr. Bennett, of—1st, molecules and granules; 2d, naked nuclei; 3d, cells of

various sizes; 4th, filaments or fibres; 5th, blood-vessels; and 6th, of crystals. The molecules and granules, as well as the naked cells of cancer, do not differ from those found in other structures, —neither do the filaments nor blood-vessels; and the crystals, which are chiefly phosphatic, are the products of decomposition. The cells, which possess the power of propagating themselves, have always one nucleus, sometimes more; and they contain, besides, molecules and granules. The nucleus is round or oval, and contains granules and nucleoli. Some people seem to think that the finding of a caudate or spindle-shaped cell is quite distinctive of cancer; but few who have any acquaintance with the use of the microscope put any faith in this, as, by pressure, cells of almost any shape may be formed. Lebert supposes that, by means of the cancer-cell alone, cancerous growths can be distinguished from all others. Bennett differs from him, and holds the opinion that, though their distribution in a particular manner in fibrous structure may be pathognomonic, no single element is so.

On examination of the body after death from the disease under consideration, the appearances which present themselves are various. Sometimes the external aspect of the stomach is not much changed; while in other cases the organ is found greatly enlarged; or it may happen to be contracted. It is often found closely adherent to the surrounding organs and tissues by the development of the malignant growth in them also. The cancerous tumour is supposed to be originally formed in the submucous cellular substances, but the whole tissues are sometimes involved. The muscular coat is at times destroyed by it, while in many instances it is hypertrophied. The pyloric end of the stomach is the most frequent seat of degeneration, and the growth, commencing at the pylorus, extends generally along the lesser curvature of the stomach, rarely further than the centre, and in no instance does it pass the constriction and spread to the duodenum. When it is situated at the cardia, the œsophagus becomes affected to a greater or less extent. In none of the treatises upon this subject have I been able to find any explanation of the fact, that the disease extends to the œsophagus, and not to the duodenum. The mere

existence of a valve at the latter is not sufficient to account for it; nor have I been able to find any explanation satisfactory to my own mind. The body of the stomach is seldom the primary seat, but becomes implicated by the propagation of the cancerous structure, either from the pylorus or cardia; and in rare cases the whole stomach is involved. The parietes of the part affected increase in thickness to the extent of an inch or more, and have a hard and tuberculated feeling. Occasionally, the mucous membrane covering the scirrhus mass is entire, but in the generality of cases it has given way before the tumour, which then presents the ragged inverted or everted edges, and the sloughy interior peculiar to ulcerating cancer.

As it is the opinion of all who have paid any attention to the subject that this disease hardly ever, if in any case, admits of cure, the object of treatment, when its existence has been fully ascertained, is not so much to effect a cure as to prevent its further increase, and to combat and palliate the worst symptoms. The utility of the removal of scirrhus growths need not be discussed here, as the site of the affection in this case puts the idea of any surgical interference out of the question. The first point to be attended to is the regulation of the diet. No absolute rule can be laid down with respect to this that would prove applicable to all cases. As a general rule, it ought not to be too stimulating, but of easy solubility and digestion, taken at regular intervals, and in small quantities at one time. Some recommend nothing to be taken but milk diet, with rice, arrow-root, sago, &c.; but in most cases the strength of the patient gives way after a time, so as to require the addition of something more nutritious,—as soups and animal food. Local bloodletting over the epigastrium or spine of the back, by removing any inflammation or congestion, is sometimes of service in relieving the pain and preventing the increase of the tumour. Counter-irritation, by means of blisters or tartar emetic ointment to the epigastrium, or by setons in the same situation, or at the back, is generally adopted, and occasionally with beneficial results. The bowels at first require to be regulated by the use of laxative medicines: of these, the best are rhubarb, magnesia, and small doses of castor oil.

In the second stage of the disease, or that in which the ulceration takes place, the diarrhoea which then sets in requires to be restrained within bounds by astringents and opiate enemata. Conium, hyoscyamus, belladonna, and a variety of other narcotics, have successively been held up as capable of curing this affection, but each in its turn gave place to others, showing clearly the incurable nature of the malady, and that there is no specific for it when so many reputed ones have been brought forward. Considerable prolongation of life might be obtained by supporting and strengthening the constitution by the judicious administration of tonics, for which purpose the preparations of iron appear to be the best adapted. Dr. Williams, judging from the absence of fat in all the tissues of persons labouring under cancer, suggests the utility of cod-liver oil as a nutrient article. When the health declines, the treatment must be entirely palliative; and we are driven to the use of opium, or some other anodyne, for the relief of the pain: this, however, ought to be refrained from as long as possible, as it may require to be continued for a long time before death, and might have lost its effect before the greatest necessity for its administration had arrived. If no food is retained, we must have recourse to nutritive clysters to support the strength as much as possible. In the cases of perforation it is essential that the horizontal position be strictly maintained, together with the utmost quiet. Large doses of opium should then be administered so as to check the peristaltic motion of the intestines, and to give the most favourable opportunity for the formation of adhesions. No food or drink should be given for some time, and the patient's strength should be supported by beef-tea. Even with the most judicious treatment, however, temporary recovery need hardly ever be expected, more especially if the perforation has occurred after a meal.

I adjoin the following cases bearing upon this subject, the progress of which I had a personal opportunity of observing, as they were admitted into the Glasgow Royal Infirmary, and treated by the physician under whom I acted as clerk at the time:—

CASE I.—Walter Pattison, aged 56, weaver, widower, admitted 21st May,

1850. Patient was seized, about four months ago, with a violent pain in the left hypochondrium, which has since continued, and has extended over to the right side. The pain was more severe for about two hours after meals, and particularly when porridge formed part of his diet. Since the commencement of his illness he has always been troubled with considerable flatulence, and before then, and till about two months ago, with constipation; but for the last two months his bowels have been regular. About a month ago the stools were of a dark-green, tarry colour, but since that time have been natural in appearance. Urine is of a healthy colour, natural in quantity, but passed very frequently, especially during the night-time. At present he has severe pain on pressure in the epigastric region, and more or less in both hypochondriac regions, in the right one of which the dulness is somewhat increased. Is not at present, and has not been, troubled with vomiting. Skin is of a dirty yellow hue; tongue white; pulse 80, feeble.

The particulars of the treatment, which consisted of tonics and counter-irritation, &c., would be of little service to mention, as he experienced little relief from it. A few days before death he complained of acute pain in the abdomen, aggravated by pressure, and his urine required to be drawn off by means of a catheter. He died on the 7th of July: thus making the whole period of his illness somewhat less than six months, which is a shorter time than the majority of such cases survive.

Upon inspection, a large cancerous mass was found surrounding the pylorus, and extending from three to four inches along the lesser curvature of the stomach, and projecting into its cavity, with a ragged and ulcerating surface. Upon section, it presented a mixture of the fibrous with very little of the medullary species of cancer. The pylorus was slightly contracted, and about an inch and a half from it, on the posterior surface of the stomach, there was a small perforation. The abdomen contained a large quantity of almost pure pus having a very foetid odour, but presented no marks of inflammation.

II.—Joseph Cunningham, aged 38, labourer: admitted August 13th, 1850. Patient complains of pain, increased

slightly upon pressure, in the epigastric region; of eructations of sour fluid matter; of flatulence; and of occasional constipation; which symptoms have existed, in a greater or less degree, for some months: is free from headache and vomiting; tongue red, glazed, and slightly fissured; pulse of good strength and fulness; appetite indifferent. He was leeches, had antacids and tonics, together with counter-irritation by means of tartar emetic ointment over the epigastrium. A few days after being put upon treatment the patient became affected with diarrhoea and frequent hiccough: he gradually sunk, and only survived about two months after admission. About three or four days previous to death he experienced great pain and difficulty of micturition. Urine was voided frequently in about half an ounce at a time, and pressure over the hypogastric region caused intense pain. On examination after death an indurated scirrhus tumour was found near the centre of the lesser curve of the stomach: it was nearly circular in shape, and between three and four inches in diameter. The mucous membrane had given way in the centre, and was softened and ulcerating.

III.—Thomas M'Mullen, aged 24; collier; married: admitted 25th November, 1850. Three months ago, in consequence, as the patient supposes, of a stress at work, he began to experience pain of a dull, gnawing character in the epigastrium, and then for the first time he observed some slight swelling of the abdomen; has been suffering for the same length of time from pains in both lumbar regions; from occasional severe headaches, and from acid eructations; but has never had any vomiting: had no treatment previous to admission, with the exception of some purgative medicine; has been of temperate habits; at present the pain in the epigastric and lumbar regions still continues, and in the former there is a considerable degree of fulness, marked dulness upon percussion, and very great tenderness upon pressure. There is very little extension of the hepatic dulness upon the right side. Since present illness commenced his bowels have been sometimes loose, sometimes constipated, but are now regular; skin has a yellowish tinge, and is hot and dry; tongue white; pulse 100, small and hard; appe-

tite indifferent; urine natural in quantity, having a specific gravity of 1020, a deep red colour, and acid reaction, and giving a copious deposit of lithate of ammonia. He was leeches and cupped several times over the epigastrium, with considerable relief to the pain: he had two blisters successively applied, and the counter-irritation kept up by means of savine ointment; and lastly, he was mercurialized. Here, however, I must mention that no suspicions of the true nature of the disease were entertained, and the mercury was administered under the idea that the case was one of hepatitis: the robust appearance of the patient; the yellow colour of his skin; the situation and nature of the pain, together with the other symptoms, fully justifying the mistake made. About the 12th of December, a large, soft, and elastic swelling, about the size of the closed fist, suddenly appeared above the left clavicle. To this iodine was applied externally. On the 23d he was seized with bronchitis. On the 24th the abdominal pain became much increased, and symptoms of peritonitis set in. For both these affections suitable remedies were had recourse to, but without avail, as he died on the 25th; and the following were the post-mortem appearances which the case presented:—

In both pleural cavities there was effusion of a few ounces of dark-coloured serum; lungs, more especially the left, were in a state of sero-sanguineous congestion; mucous membrane of the bronchial tubes of both lungs inflamed; bronchial and œsophageal glands apparently healthy; heart natural; about five pounds of bloody serum were found effused in the cavity of the peritoneum; between the folds of the intestines a few shreds of coagulable lymph were found: the liver weighed six pounds and three-quarters; its left lobe was greatly enlarged, and extended completely across the abdomen, coming in contact with the parietes of the left side; the concave surface of the liver had formed strong adhesions to a mass of large glandular tumours which existed in the gastro-hepatic omentum and surrounding tissues. The whole structure of the liver, with the exception of the upper surface of the central portion for about a depth of two and a half inches, was completely disorganized; the left lobe was soft, and broke up by the slightest touch; it consisted of soft, lardaceous matter, mixed

with the remains of the structure of the liver, and was interspersed here and there with dark-brownish or black-coloured masses, apparently of extravasated blood; the right lobe was somewhat similar to the left, but the encephaloid masses were not so completely amalgamated with the tissue of the liver, more separated from each other, and of firmer consistence: several small abscesses containing thick pus existed towards the under and back part of the organ, and one of these, or of the cerebriform tumours, had perforated the peritoneal covering of the left lobe, and formed an opening into the cavity of the peritoneum. The upper and central portion, though not so extensively diseased as the other parts, was soft and friable, and presented a mottled appearance, from numerous small white spots interspersed throughout its substance. The lesser omentum, transverse mesocolon, and mesentery, were all stuffed with medullary tumours of various sizes, completely matting together the pyloric extremity of the stomach, the pancreas, and the duodenum. The coats of the stomach towards its lesser end were thickened, and had an indurated feeling externally. On laying open this viscus a mass of encephaloid growth was found around the inner side of the pyloric orifice, and extending for some distance into the body of the stomach. The mucous coat in that situation was completely destroyed, and one or two small ulcers were situated upon it, of a circular form, and with well-defined and prominent edges. The intestinal canal below this was healthy; spleen congested; kidneys anæmic, soft, and flabby; urinary bladder natural. Under the microscope a section of the tumours in the stomach and liver was seen to consist of cells containing nuclei and molecules, and of numerous granules; but very little of fibrous structure was apparent: the cells were principally globular in form, but some of a caudate shape were also discovered. The tumour in the neck exhibited a similar structure under the microscope.

IV.—The peculiarity in the following case consists in the short duration of the patient's illness, compared with the great extent of the disease. William Drummond, aged 45; labourer; single: admitted 6th January, 1851. About a fortnight ago, without any assignable

cause, both of patient's legs began to swell, and the feet to feel very chill during the night. Soon after, he observed his abdomen to become hard and tense, but did not experience any pain in it, nor in any other part of the body. He had some cough at the commencement of his illness; this, however, is now entirely gone: has been of very intemperate habits, and had no treatment before admission. At present there is considerable dulness upon percussion over the lower half of right side of chest, and extending for two or three inches below the margin of the ribs. The respiratory murmur in the upper half of right side of chest is weak, and entirely obliterated over the inferior half. There is no pain on pressure over the hepatic or epigastric region; percussion over the latter is dull. Respiration and percussion upon left side of thorax are both natural. The abdomen is dull upon percussion in the lowermost parts, and very clear in the uppermost, with the exception of the regions before mentioned: its superficial veins are enlarged and distended, and distinct fluctuation is detected in it. The legs are œdematous, white, and glazed, and pit deeply upon pressure. Skin of a dirty yellow hue; tongue white; bowels slow; pulse 112, small and weak; heart's sounds normal; urine scanty, and voided with great pain and difficulty: it is of a high colour, has a specific gravity of 1023, an acid reaction, and gives a copious deposit of lithates, but contains no albumen. The patient died on the fourth day after admission; and the following are the post-mortem appearances which presented themselves:—

At the posterior part of the lower lobe of the right lung some old pleuritic adhesions existed, and a few ounces of dark-coloured serum were found in the pleural cavity. The right lobe of the liver extended about half way up the chest, and had very much compressed the right lung, which was otherwise healthy in appearance: no adhesions on left side; lung congested; heart natural. The abdomen contained about eleven pounds of bloody serum, mixed with some clots of blood. The liver was of enormous size, and weighed twelve pounds: it only extended for a short distance below the costal cartilages, but encroached much more upon the cavity of the thorax, especially on the right side, and was pushing up the diaphragm.

Little of the original structure of the organ could be seen; but it had degenerated into one mass of tumours, varying in size and consistence, but all of them having nearly a circular form. Some of these growths were much softer than brain, others much harder, and presented a peculiar mottled appearance, consisting of a mixture of hard, bluish, cartilaginous, and soft brownish and yellow lardaceous-looking matters. In the transverse fissure, just at the point of entrance of the portal vein, there was a clot of blood, and the appearance of a perforation by ulceration of the peritoneal covering of the liver. The coats of the stomach were considerably thickened, and its cavity diminished in size. In the smaller curvature, about an inch from the pylorus, and projecting into the stomach, there was a flattened tumour, of an oval shape, measuring two inches in length and one in breadth, and having an indurated cartilaginous feeling. Nearer the cardiac orifice, but also on the lesser curvature, there was a circular mass, about the size of a crown-piece, having the same character as the other, but with the addition of a central depression in a state of ulceration. The glands of the mesentery were a little enlarged; the large intestines were thickened and much contracted; kidneys and urinary bladder healthy. Under the microscope the tumour presented numerous well-marked cancer-cells, but no fibrous structure.

V.—Charles Davidson, aged 47; shoemaker; married: admitted 18th October, 1850. Patient had been of very intemperate habits, and on admission was labouring under bronchitis and chronic rheumatism, but did not complain of any dyspeptic or cardiac symptoms. The heart's sounds were weak, but normal. Soon after his admission he began to complain of flatulence, and to vomit his food while in the act of taking his meals. The left side of chest gradually became dull upon percussion, and the respiratory murmur weaker, though still attended with sibilant and bronchial râles; and for a month previous to his death little or no murmur could be detected in it. The sputa were occasionally tinged with blood, and he had diarrhoea, with every now and again some blood in the stools: his countenance became anæmic and anxious, and

his skin assumed a peculiar dingy appearance. About a month and a half before the fatal issue his legs and feet became œdematous, and fluid began to be effused into the cavity of the peritoneum. The general emaciation increased till the 30th January, 1851, when he became delirious, and died in three hours afterwards.

31st Jan. 1851. *Sectio cadaveris*.—Pleuræ of both sides of the chest studded with numerous small white bodies having the appearance of miliary tubercles. Mucous membrane of bronchia of right lung inflamed. Towards the apex of the lung, on its external surface, there were several marks having the usual appearance of cicatrices; and over one of these there was a thin plate of cartilage, which, under the microscope, was seen to have the ordinary structure of that tissue. The left lung was filled with small cancerous-like tumours, varying from the size of a millet-seed to that of a hazel-nut. The pleura was strongly adherent throughout to the pericardium and posterior part of the thorax. At the base of the heart and root of the left lung there was an immense collection of melanotic and cancerous-looking tumours, apparently enlarged and diseased glands, which completely matted together the great vessels at the base of the heart with the vessels and bronchial tubes entering the lung. The pericardium was thickened, of a bright red colour approaching to violet, and was adhering to the heart throughout its entire extent. Between the pericardium and heart there was a layer of plastic lymph about the sixteenth of an inch in thickness; and distributed through this lymph there were numerous little granules, and small, white, tubercular-looking tumours. The substance of the heart was soft, and of a dirty brown colour. No valvular disease. The abdomen contained about eighty ounces of clear limpid serum. Liver hard and contracted. Around the pyloric orifice of the stomach there was a tumour about the size of a turkey's egg; and this was constricting the opening to such an extent that the little finger could with difficulty be passed through it. On laying open the stomach, the tumour was seen to consist of two oval masses, each about two inches in length, and one and a half inches broad. The extremity of the tumour projecting towards the body of the sto-

mach was smooth and rounded: that around the margin of the pylorus, where it very abruptly terminated, had a roughened and nodulated appearance, but no part of it had gone so far as ulceration. The adjoining portion of the duodenum was slightly thickened. The portion of the stomach occupied by the cancerous mass was about half an inch in thickness; the rest had its coats much thinned. The other abdominal viscera were healthy. A section of the tumour in the stomach was seen to consist of fibrous stroma, with cancer-cells and granules, and a few compound granular cells. The tumours in the lung and pericardium were not so accurately examined, but appeared to have more of the character of scrofulous growths.

The site of the tumour in this case, viewed in relation to the period of vomiting,—viz. when the patient had not finished his meal,—teaches us that, though, as a general rule, we may consider the interval at which the food is rejected after being taken as diagnostic of the position of the diseased part, we cannot in all cases depend upon this symptom.

ON THE MUSCLES OF THE BACK.

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WERE any illustration needed to show how a single error in anatomy, once established and allowed to pass, rapidly produces other errors, until the description of that department of the animal frame to which it refers is reduced to a state of utter confusion, none better could be selected than the commonly received account of the muscles of the back, which renders almost unintelligible a region the simplest and the most typical in the whole body. I cannot refrain from expressing my surprise that such a scandal should be permitted to exist. The complicated muscular apparatus which moves the highly developed limbs in man is taught with a degree of tedious minuteness, without the proper reference in its relations to the firm yet moveable column of sup-

port, constituted by the succession of bony segments termed the vertebræ.

The cause of all this error lies in the glaring inaccuracies which are still, to our shame, interwoven with the description of the skeleton. Whilst the same name is applied to totally different parts of a vertebra, different names are applied to the same parts; and hence muscular fibres which extend from corresponding points of bone, pursuing a simply longitudinal course, are described with a multiplicity of terms, as most erratic, planless, and incomprehensible. With the present system of osteology, it is impossible to describe the simplest muscles of the body; and no one feels the least reluctance to confess that he knows nothing whatever of the "region of the back."

In addition to osteological errors, we have to encounter the annoyance of a most arbitrary and faulty muscular nomenclature. It really seems a practical joke, that anatomists say, thus far shall be *sacro-lumbalis*, and thus far *musculus accessorius ad sacro-lumbalem*: thus far shall be *semispinalis colli*; thus far *multifidus spinæ*. Of late years we have had the re-introduction of some *rotatores spinæ*. Where are they, forsooth, if they owe not their being to the patience, ingenuity, and manipulation of the dissector? No candid person will hesitate to say that to make these muscles correspond with description he has invariably cut them into shape. For the better illustration of these parts as they are seen in man, let us take the skeleton of the common snake. It is composed of a series of moveable vertebræ, of which none are coalesced save the vertebræ of the head; all others play freely in a ball-and-socket-joint, there being neither sacrum nor coccyx. These vertebræ are moved by the following muscles:—

1. *The spinalis dorsi* (Cuvier), arising from the lateral face of the spinous processes, and directed from before backwards, divides at its inner side into as many fasciculi as there are vertebræ, each fasciculus terminating in a long tendon contained in a tendinous sheath. The muscle then composed of tendinous and fleshy fibres, extends from vertebra to vertebra, attached to the most posterior of the bony levers of the column, namely, to the spinous processes.

2. *The longissimus dorsi* arises from "the extremity of the point of the an-

terior articulating process, corresponding with the transverse process" (Cuvier): in other words, with the diapophysial element of Owen. It is composed of tendinous and fleshy fibres, extending between these points of bone along the whole length of the vertebral column.

3. *The sacro-lumbalis* is composed of tendinous and fleshy slips, passing from the posterior border of the upper third of the ribs, (somewhat corresponding with the angle of the ribs in human anatomy) along the whole length of the vertebral column.

What, then, would be a summary of the preceding remarks? The posterior aspect of the vertebral column presents three prominent points of leverage arranged in longitudinal linear series on either side of the trunk. The central points are the apices of the spinous processes, which, as we know, are often bifid. External to these are the diapophyses. External to the diapophyses are the angles of the ribs.

From between these points of bone muscular and tendinous bands pass, constituting three longitudinal compound muscles — the *spinalis dorsi* (which comprises the *interspinalis*), the *longissimus dorsi*, and the *sacro-lumbalis*. They are all extensors of the spine, where the muscles act together upon both sides of the trunk. Where only one set acts, the spinal column is inclined to the corresponding side.

Under the preceding lies a layer of oblique muscular and tendinous fibres, passing from the transverse processes (diapophyses) to the spinous processes, the *semi-spinalis* or *transverso-spinalis* (Cuvier). Their action is to rotate the *vertebræ* upon one another.

Were I to state that in the human subject the muscles of the back might be dismissed in as summary a manner, there are many who, remembering the list of hard names, with which that department of human anatomy is enriched, would feel disposed to withhold their belief. It can be readily proved, however, if one point be conceded; namely, that we adopt an accurate and scientific nomenclature of the elements of the *vertebræ*, instead of the faulty one now in use.

Let it be borne in mind that every vertebra is composed of a body or centre, around which, in its perfect form, are four canals; one, the vertebral groove for the spinal chord; a second,

represented by the ribs and the sternum, for the heart and great vessels; and two lateral canals for the vertebral arteries: any of the surfaces of bone, bounding these canals, may constitute a lever for muscular attachment. Confining our attention to the posterior surface of the vertebral column, we notice (1) the spinous processes; (2) the diapophyses (or transverse processes), but faintly marked in the cervical region: long and prominent in the dorsal region; known as the tubercles, or the apophysary elements (Cruveilhier) in the lumbar region, still more faintly marked in the sacral region; (3) the ribs, short and stunted in the cervical region, where they are hollowed or grooved to support the cervical nerves, as they emerge from the intervertebral foramina; long and moveable in the chest, where they form an osseous cavity, capable of rising and falling in respiration; short and fixed in the abdominal region, where (under the unhappy name of transverse processes, which confounds them with the dorsal diapophyses) they give origin to the *transversalis* muscle by well-marked fibrous ribs.

The mobility of the *vertebræ*, the inclination of the articulating processes, the length and direction of the bony levers, must all be remembered in the examination of the muscles of the back. Where five *vertebræ* coalesce to form a solid piece, the sacrum, a base of support to the column above it, the muscles attached to these bones, no longer needed, become blended together, and are regarded as constituting the origin of the muscular and tendinous slips, which, proceeding thence, pass upwards to the moveable *vertebræ* of the dorsal or cervical region. This is why we talk of the *longissimus dorsi*, and the *sacro-lumbalis* arising from the sacrum and pelvis, and extending upwards to their respective insertions. Cuvier, in his description of the same muscles in the common snake (*Coluber natrix*), makes them arise at the head (the only part of the vertebral column where the *vertebræ* are coalesced) and extend downwards to the tail.

The more moveable the *vertebræ* one upon another, the thicker and more powerful are the muscles attached to them. Hence, in the lumbar region, the extensor muscles are strongest; in the neck the rotator muscles are strongest. In the dorsal region, where (from

the necessity of preserving a firm column of support, upon which the ribs may move,) scarce any extension is possible between the superior vertebræ, the interspinalis muscles are represented by ligamentous bands passing from the imbricated spinous processes; and the common extensor pulls upon them as upon a single piece. The oblique direction of the cervical articulating process allows of considerable rotation combined with extension; the tongue of bone, dipping down from the anterior inferior margin of the body of the cervical vertebra, presents flexion forwards. In a well-marked skeleton, the apex of the spinous process of the axis may be made in extreme extension to touch the apex of the seventh cervical vertebra, the intervening shorter spines radiating from the point of contact as from a centre. The articulating processes in the dorsal region allow of the lateral swagging movement of the trunk. Rotation is very limited, and extension of the vertebræ one upon the other is impossible in the upper part of the chest from the oblique imbricated direction of the spinous processes. At the junction of the lumbar and dorsal regions we have combined both the lateral swagging movement, and also flexion and extension, as is well illustrated by the springing movement in any of the active carnivorous quadrupeds. The mobility of the vertebral segments, which ceases at the sacrum, is in a slight degree resumed in the coccyx, which possesses the power through the coccygeus muscle of curving forwards to diminish the inferior outlet of the pelvis.

With these prefatory remarks I shall now pass to the anatomy of the muscles of the back, purposely rendering their description as concise as possible. The muscles first exposed upon the reflection of the integument of the back, belong to the upper extremity, which we are taught by homology to regard as the separated and displaced costal appendage of the occipital vertebra. The trapezius, highly developed, still retains at the upper extremity its attachment to the occipital spine. The levator anguli scapulæ and the serratus magnus, portions of the same muscle, extend from the ribs to the scapula; a bone, which although triangular and expanded for muscular attachment, is now recognised as a rib. The latissimus dorsi and the

two rhomboids arise from the spines of the vertebræ, and are inserted respectively into the humerus and the scapula. Were we to represent the muscular system of a vertebrate animal in its simplest form, it would be expressed as muscular and tendinous slips passing from contiguous vertebræ. Yet here we have the separated costa or rib of the occiput receiving muscular fibres from nearly the whole length of the vertebral column. The vertebral aponeurosis, which extends from the upper border of the serratus posticus inferior, under the serratus posticus superior, to the splenius muscle, bends down the proper muscles of the back.

They may be arranged in three layers: 1, oblique; 2, longitudinal; and 3, oblique.

1ST LAYER.—*Oblique*, from within upwards and outwards. The *splenius* muscle occupies the cervical region, where rotation is more free than in other parts of the trunk. It arises from the four or five upper dorsal, and the four or five lower cervical spines; the fibres pass upwards and outwards to be inserted into the posterior tubercles of the transverse processes of the three or four upper cervical vertebræ, into the mastoid process and into the superior curved ridge of the *occipital bone*, or, *homologically expressed*, into the diapophyses of the parietal and occipital, and three or four upper cervical vertebræ.

2ND LAYER.—*Longitudinal*, composed of three muscles: *interspinales*, *longissimus dorsi*, *sacro-lumbalis*.

The interspinales exist as well-marked muscles in the cervical and upper lumbar region: in the former they are arranged in pairs, the spinous processes being bifid. In the upper dorsal region they are represented by tendinous bands passing between the imbricated dorsal spines. In the lower lumbar region they cease to exist as muscles, the quadrilateral spines admitting no extension backwards. They cease in the sacrum, where the vertebræ coalesce to form a single piece, and they then become blended with the muscular and fibrous tissues covering the posterior surface of that bone. But at the junction of the lumbar and dorsal regions there exists an hypertrophy of the interspinales. At that point, where great freedom of movement is allowed by the different directions of the articulating processes, which look backwards and

forwards in the one, and inwards and outwards in the other region, a layer of muscular and tendinous fibres passes from spine to spine, known as the *spinalis dorsi*: it extends from the two or three upper lumbar spines, to the seven or eight lower dorsal spines.

I need hardly observe that the *recti capitis postici* are *interspinales* which, continued upwards, are prolonged over the vaulted and expanded cranial spines, as *occipito-frontalis* and *pyramidalis nasi*.

The blended sacral origin of the *longissimus dorsi* and the *sacro-lumbalis* is called the *erector spinæ*. The former extends from the diapophyses of the sacrum as far as the mastoid process of the temporal bone, under the names of *longissimus dorsi*, *transversalis colli*, and *trachelo-mastoid*. I would confine to this muscle the name of *longissimus dorsi*; and allow the two last terms to be forgotten, for it is impossible to dissect the superior portions as perfectly distinct muscles. Its tendinous insertions are numerous: a depending process from the tubercles or diapophyses of the four upper lumbar vertebræ, receives as many short tendinous slips; stronger tendons are attached to each of the dorsal diapophyses; and the cervical vertebræ receive tendons at the same points, which, however, are less clearly marked in man, from the early coalescence of the cervical rib, short, stunted, and hollowed to support the cervical nerves as they emerge from the intervertebral foramina. The mastoid process receives the last slip, which we know under the name of *trachelo-mastoid*.

The outer layer is known by the three names of *sacro-lumbalis*, *musculus accessorius*, and *cerviculis ascendens*. The two last names I would not retain. The name *sacro-lumbalis* is inappropriate, as the muscle arises from the ilium and is inserted into the ribs.

Let it, then, be named *ilio-costalis*. Arising from the posterior fifth of the crest of the ilium, from a space corresponding with the attachment of the *gluteus maximus*, (that great muscle which extends the pelvis to maintain man in the erect posture,) it is inserted into the four upper abdominal ribs, all the dorsal ribs near their angles, and into all the cervical as high as the third vertebra. A slip is sometimes continued to the axis.

The *interspinales* then pass from spine to spine; the *longissimus dorsi* muscles from diapophysis to diapophysis; the *ilio-costales* from rib to rib, along the whole length of the vertebral column. Under the preceding, and nearer the arches and laminae of the vertebræ, extends obliquely a group of muscular and tendinous fibres from the diapophyses to the spinæ. These muscles are described under the names of *semi-spinalis dorsi*, *semi-spinalis colli*, *multifidus spinæ*, *rotatores spinæ*, and *complexus*. I would include them all under the name of *obliqui spinæ* or *rotatores spinæ*, as distinguished from the *erectores spinæ*. There does not appear to me to be any sufficient reason why an attempt should be made to separate the *semi-spinales* muscles from the *multifidus spinæ*, further than that the whole layer of oblique muscular and tendinous fibres admits of a more ready separation, by the aid of the knife, into a superficial and a deep set in those situations where the vertebræ move most readily one upon another, and where rotation is, consequently, most freely performed. The same remark applies to the so-called *rotatores spinæ*, which are nothing more than the deepest oblique fibres passing from contiguous vertebræ.

The *complexus* is in man separated at its insertion from the rest of this oblique group, in consequence of the great expansion of the occipital bone, which receives the posterior segments of the encephalon. It arises from the diapophyses of the four, or five upper dorsal and four or five lower cervical vertebræ, and is inserted into the occipital spine between the superior and the inferior curved lines. Its origin and insertion proclaim it a part of the oblique layer.

The *obliqui capitis superior* belongs to this group. The *obliquus capitis inferior* is a special muscle oblique in the opposite direction, namely, upwards and outwards.

The *intertransversales* muscles exist only in the neck and in the lumbar region. They seem to me, from their attachments, to represent the *intercostales*, being intimately connected both with the *scaleni* and with the *quadratus lumborum*, and being described as *absent* in the dorsal region, their relationship with the dorsal intercostal muscles not having been recognized.

In recapitulation: The muscles of the

back are either oblique or longitudinal, and may be arranged in the following layers:—

1. Under the vertebral aponeurosis, and under the two serrati, is seen the splenius muscle, the fibres of which extend obliquely upwards and outwards, from the four upper dorsal and the four lower cervical spines to the diapophyses of the parietal, occipital, and four upper cervical vertebræ.

2. We see three longitudinal muscles:—(a.) The interspinales, passing from spine to spine. (b.) The longissimus dorsi, passing from diapophysis to diapophysis. (c.) The ilio-costalis passing from rib to rib.

3. Nearer the vertebral column is a group of muscular fibres, passing obliquely upwards and inwards from diapophysis to spine, which may be comprised under the one head of obliqui or rotatores spinæ, the complexus being only the upper portions separated at its insertion in consequence of the expansion of the occipital spine, and the great mobility of the head.

There are many interesting points of detail connected with these muscles which I have purposely avoided; my object being to show the general plan upon which they are constructed and arranged. Any apparent deviations from their typical simplicity have reference to their bulk, and not to their points of bony attachment, which remain the same under all circumstances; and such irregularities may be studied in different animals with great advantage, in connection with the shape of the vertebræ, and the direction of the articulating surfaces as pointing out the particular movements which are most readily performed in the different regions of the vertebral column.*

NEW YORK MEDICAL COLLEGES.

THERE can be no complaint, in the city of New York, of a lack of institutions for teaching medicine in all its ramifications. Enterprise, talent, and wealth, are all employed to sustain the different colleges; but whether they are rivals, or in friendly concert are endeavouring to elevate and purify the profession, time alone can determine. Private instruction is also freely imparted in that city.

* Since writing the above, I have observed that Dr. Edward D'Alton adopts the name ilio-costalis for sacro-lumbalis, in his work on Human Anatomy.

ON

BANDAGING THE ABDOMEN AFTER DELIVERY.

By W. B. KESTIVEN,
Surgeon.

A LARGE number of obstetric practitioners, and nearly all writers upon the practice of midwifery, lay great stress upon the application of the bandage around the abdomen immediately after delivery. So much importance, indeed, is attached to this ceremony by non-professional persons, that the medical attendant will most probably be considered to have been guilty of a very serious omission, should he leave the lying-in chamber without having applied it, or even if he shall have failed to do so forthwith on the completion of the labour.

The writer believes that this opinion upon the importance of the binder, generally entertained, has originated in the *nimia diligentia medici*, who therein performs the office of the nurse, and on this ground he objects to the undue importance attached to such a subordinate proceeding. Not on this ground alone does he, however, venture to call in question the wisdom of learned authorities: he has acquired the conviction from observation during fifteen years' practical acquaintance with the obstetric branch of his profession, that bandaging the abdomen immediately after delivery is not only unnecessary, but in many cases absolutely injurious; its utility being quite other than usually stated, while any advantages it offers are to be gained by its employment at a later period than generally directed.

The writer is sensible that the weight of authority is against the opinion that he now advances; he is aware that men of large experience and of well-merited reputations attach great importance to the early application of the bandage. He would not have dared to call in question the soundness of the conclusions of such undoubted "authorities," had he not made this a subject of particular observation; and because he believes that more mischief than benefit is derived therefrom. He trusts that the facts and reasonings now to be adduced will satisfactorily account for his dissent,

and defend him from the charge of promulgating a "dangerous heresy." He has, on the other hand, support for his views in the writings of some obstetricians of known acquirements and experience. Thus, the lamented Dr. Hugh Ley, whose skill, accomplishments, and industry, are universally acknowledged, was wont to express a strong opinion upon this subject, in his *Lectures on Practice of Midwifery*;—which opinion he more fully stated and illustrated by facts drawn from his own observation, in a paper published in the *LONDON MEDICAL GAZETTE*.*

Other writers also furnish some warrant for the views entertained by the writer, in the silence they observe with regard to the use of the binder, or by the period at which they advise its employment.

Dr. Burnst does not enjoin bandaging as an indispensable measure; hence it may fairly be inferred that he attaches no great importance to its utility. Dr. Merriman,† from among other points which he enjoins upon the practitioner to be observed before he leaves the lying-in chamber, omits all mention of the roller or bandage; therefore the inference is, that he regarded it as unimportant, at least, in ordinary cases. This inference is strengthened by the directions given by Dr. Merriman for the management of cases of hæmorrhage, *e. g.*—"Should the placenta be expelled, and the hæmorrhage be inordinate, in addition to the usual means of subduing it pressure must be made upon the uterine region by means of the hands, or a *broad bandage put round the body*." Dr. Merriman also advised that a broad bandage, to be tightened gradually, should be applied around the abdomen during labour, in women liable to flooding.§

Dr. Blundell's directions with regard to the use of the bandage are thus expressed:—"Afterwards bracing the abdomen with a broad bandage, applied over the abdomen externally to the dress of the patient, *with that degree of tension which may yield a sense of grateful support*." Attention will be subsequently directed to this

advice by Dr. Blundell. Dr. Collins, in his great work, which constitutes so valuable a treasury of facts, advises the application of the bandage *after the uterus is firmly contracted*.

It appears advisable, in order to arrive at a correct conclusion on this question, to examine—1stly, the alleged objects to be gained by the bandage; 2ndly, its real effects; 3rdly, its proper object, and the right period for its application.

1st. The objects alleged to be gained by the application of the roller directly after the completion of labour, are:—*a*, to promote the contraction of the uterus; *β*, to lessen the severity of the after-pains; *γ*, to prevent hæmorrhage; *δ*, to prevent syncope; and *ε*, to protect the patient against the consequences of sudden alteration of the balance of the circulation, by which syncope, inactivity of the uterus, hæmorrhage, and subsequent diseases, have been produced.

On examining, at the bedside, the validity of these several objects, it may be observed in the first place, that all, or any, of these supposed ends may be gained without the use of the bandage.

a. In the vast majority of cases the uterus contracts rapidly, firmly, and permanently, directly upon delivery, without the aid of bandaging. That such is the case a very short experience among the *labouring poor* will soon convince the clinical student. The poor women who are delivered by midwives, and the hundreds, aye thousands, who are yearly delivered without any aid, would, were it not so, have all the dangers of uncontracted uterus to contend with. That such is rarely the case, admits of no doubt.*

β. That measure which shall promote the contraction of the uterus can hardly be seriously recommended as a means of lessening the severity of after-pains: the contradiction is too manifest to require further comment.

γ. For the prevention of hæmorrhage the application of a roller certainly possesses no claim. Every practitioner who has diligently applied the bandage has had to remove it, in order to apply that efficient pressure to the uterus which is most important in promoting its contractions, hæmorrhage having taken place in spite of the compression

* Vol. xviii.

† Lectures.

‡ Difficult Parturition.

§ The writer has occasionally adopted this practice, and has seen irregular contraction of the uterus, with retention of the placenta, follow thereon.

* Mr. Robertson observes, that uterine hæmorrhage is unfrequent among the poor.

that had been made by the bandage. In fact, the tightly bandaging the hypogastric region with the addition of pads, compresses, basins, &c. &c. has probably frequently given rise to hæmorrhage by interfering with the gradual tonic contraction of the uterus. The early application of a binder and compress is a complete obstacle to that vigilant attention to the state of the uterus after labour which it is the wisdom as well as the duty of the medical attendant to pay for some little time after delivery. Where pressure is properly made, hæmorrhage is not frequently met with. The very officious accoucheur, who loads his patient's abdomen with divers pads, and other similar contrivances, must frequently have had occasion to remove them. Without these, the earliest signs of hæmorrhage may be recognised; with them, they are often concealed: without these hindrances, therefore, the occurrence may be arrested at its outset. It is not the purpose of the present communication to dwell upon the treatment of uterine hæmorrhage, but the above hints may serve to show that the bandage has few claims for adoption on that score.

δ. The prevention of syncope is undoubtedly an object of paramount importance; it calls, therefore, for very full examination, as obtainable by the use of the bandage after labour. The indication for its use in reference to the prevention of syncope is theoretically deduced by analogy from the necessity that exists for the application of abdominal compression during the operation of paracentesis. Here, although an analogy does undoubtedly exist, the cases are far from parallel—the conditions not identical—at least not in labour untended with flooding. When hæmorrhage from the uterus occurs, the heart is then physiologically affected in the same manner as where a large quantity of dropsical effusion has suddenly been removed from the abdomen. The removal of the pressure from surrounding vessels in the one case being performed in the upright or sitting posture; suddenly empties the heart of its blood, in the same way that it is emptied by a sudden gush from the uterus. In natural labour there are these points of physiological difference: the heart is not suddenly deprived of a quantity of blood, because the mass of blood previously circulating in the enlarged

vessels and hypertrophied structure of the uterus is thrown back upon the aorta *pari passu* with the diminution of the tumour by the contractions of the uterus. The consequent removal of pressure from the surrounding vessels is therefore compensated by the non-abstraction of blood from the arterial system, which, so far, may be regarded as the equivalent of the compression which is had recourse to for the purpose of obviating the sudden change in the state of the circulation that takes place in tapping. Cases of excessive quantity of liquor amnii, triplet and quartet cases, form instances in which the analogy with the effect of tapping becomes closer. The difference in position must also be borne in mind, when an analogy is attempted to be drawn between these two conditions. In tapping, the position is erect—in labour, it is horizontal. To this rule of difference, however, exceptions occur; parturition sometimes occurs so rapidly, and so unexpectedly, that delivery takes place before the parturient woman can assume the recumbent posture. That such exceptional cases do not invalidate the rule is sufficiently shown by their rarity, and also by the evil consequences that often follow thereon. It may be remarked then for these reasons, that it is obvious that women after delivery have not to thank the bandage for their exemption from syncope. The writer has never seen a case of mere syncope occurring after labour, where the horizontal posture has been carefully observed for some hours, although he has systematically neglected to apply the bandage. He has occasionally seen it, and has heard of even fatal syncope where this precaution of the horizontal position has been violated.

ε. Having above disposed of the futility of the argument for the use of the bandage to prevent hæmorrhage or syncope, other evils supposed to be consequent upon a disturbance of the balance of the circulation are obviously as little likely to be benefited by that contrivance.

So much, then, for the alleged occasions that call for the use of the bandage; for all which occasions bandaging the abdomen is “a custom more honoured in the breach than the observance.” It is time that the second division of this subject be examined.

2nd. The real effect of bandaging the abdomen after delivery.

a. It affords support to the abdominal walls, if applied moderately firmly.

β. It gives comfort to the patient, and meets her wishes or prejudices with reference to the preservation of the figure. Among its effects, which are not so harmless as these, are its aggravation of after-pains, and the inducement of irregular contraction of the uterus; its obstruction to manipulations; its interference with the action of the diaphragm; its displacing the uterus, and causing obliquity, prolapsus, &c., of that organ; its interference with a most valuable means of controlling uterine hæmorrhage, viz., the compression of the aorta. All these are highly important matters, and are to be found among the consequences of the tight bandaging which is adopted by some practitioners.

3rd. The consideration of the two preceding topics leads to that of the third,—the proper object of, and right period for, the application of the bandage. The first point may be very briefly expressed in the words of Dr. Blundell. It is to be applied “with that degree of tension which may yield a sense of grateful support.” This is the whole truth of the question—the sole object of the bandage is to afford a comfortable degree of support; it is not to effect forcible compression of the abdomen.

The proper period for its employment is therefore not until the uterus has firmly contracted,* the patient having been left to undisturbed rest for at least two hours, has had her linen changed, and is being “put to bed.” Before this period it, as has been shown, is but an incumbrance. At this time the bandage will afford “a sense of grateful support,” and will meet the patient’s prejudice with reference to the preservation of her figure—a prejudice which may in this way be harmlessly humoured; it being emphatically impressed upon the minds of the patient, and her attendants, that the application of a bandage is of infinitely less importance than quiet rest; that the contraction of the uterus is more effectually and naturally induced by the child’s mouth at the nipple, than by all the

screwing and squeezing machines that ever were contrived.*

If the necessity of any proceeding may be measured by the end it is intended to serve, most assuredly the importance of the abdominal bandage has been much overrated. The preceding remarks have shown that its alleged objects are not obtained, even if they be desirable; that its real effects are either trifling, or evil; that its proper object is of a very subordinate character, and pertaining rather to the functions of the nurse than to those of the medical attendant. The space now occupied by this paper would not have been requested, merely to point out the inefficiency of bandaging for certain supposed purposes, had it not been also attended with the objections and evil consequences that have been stated, and for which reasons it is desirable that it should be less urgently enforced.

It is at the present day a matter of no slight moment, that all unnecessary interference and manipulations connected with, or bearing upon the practice of midwifery, should be avoided. For this reason, an apparently insignificant, but really important practical point in obstetric *practice*, is deferentially brought under the consideration of the readers of the *MEDICAL GAZETTE*, a periodical that has been correctly entitled a Journal of *Practical Medicine*.

Upper Holloway,
June 21, 1851.

THE CENSUS IN IRELAND.

ON Monday last a corrected Parliamentary paper of the census in Ireland was printed. The decrease is 20 per cent. between 1841 and 1851. In 1841 the total number of persons was 8,175,124, and, on the 31st of March last, 6,515,794; being a decrease of 1,659,330, or 20 per cent.

* Dr. Hugh Ley stated, that he had found the bandage useful in those cases in which the uterus, after having contracted to its usual size and hardness after labour, again relaxes and fills with blood; this process of contraction and relaxation being several times repeated. In such cases the writer has not ventured to apply the bandage until he has been sure that the contraction was permanent, and this for the reasons already advanced against its employment for the prevention of hæmorrhage.

Dr. Robert Lee (Clinical Report), with regard to the same class of cases, offers the same advice; taking at the same time occasion to point out the inefficiency of introducing the hand in the uterus to promote its contraction in such cases, and dwells upon the mischievous results of this too ready tampering with so delicate an organ.

* This, it has been already said, is the period assigned for its application by Dr. Collins, and some other writers.

MEDICAL GAZETTE.

FRIDAY, SEPTEMBER 12, 1851.

It is with great pleasure that we direct the attention of our readers to the **EXAMINATION PAPERS** of the **GRANT MEDICAL COLLEGE**, at Bombay.* This is, we believe, the first occasion on which native candidates in the Bombay Presidency have presented themselves for examination at the College, and have received diplomas conferring on them the privilege of practising throughout our Indian empire. From a report now lying before us, we learn that eight out of nine candidates for the honour were found on examination to be fully qualified; and that the answers which they returned to the various questions were highly creditable to themselves, as well as to the institution in which they received their education. In addition to these questions, practical examinations were held on clinical reports of cases in the Hospital,—on Anatomy and Surgical Anatomy, with operations in the Dissecting-room, and on Chemistry and Medical Jurisprudence in the Laboratory. The whole period devoted to the various examinations was eleven days. We extract the following remarks from the report of Dr. M'Lennan, the Government Examiner:—

“The examinations throughout have been strictly practical, and on all the subjects have been conducted with a view to the ascertainment of the extent of knowledge of the *principles of practice*, and have been, as much as possible, intended to obviate any dependence of the candidates on retentive memories, for finding answers to the questions given.

Having at one time had my thoughts much directed towards the medical education of natives, I had never entertained

a doubt that they were as capable of acquiring the preliminary information necessary for the foundation of a medical education as any men whatsoever; but I had entertained doubts as to their reasoning powers, and as to their correct and useful application of that preliminary knowledge, to the recognition, discrimination, and treatment of various forms and shades of disease, not differing in name though differing in other matters of far greater import than name.

The result of these examinations has gone far to remove my doubts on this subject, and so far as examinations can test fitness for engagement in medical and surgical practice, the graduates of the Grant Medical College have proved their fitness to as great a degree as I believe is ever done in Europe.

Such knowledge could not have been acquired excepting by great industry on their part, but its acquisition has in my opinion been due, in a great measure, to the pains taken, and to the judgment shown in their instruction by the Principal and the Professors.”

We learn from the address of Dr. Morehead, the Principal, that Grant College has been founded about fifteen years, and that courses of medical instruction have been given in it for a period of five years. Of its founder, and the objects of its foundation, we have the following description:—

“Familiar from his early years with India, its people, their customs, their wants, Sir Robert Grant was well aware that the medical art, as followed in this country, was most defective, and that, in consequence, the people were subjected to suffering, which a scientific art, practised by enlightened and conscientious men, would go far to ameliorate. Nor did he fail to anticipate that another important end would, at the same time, be gained. He justly reasoned that it was in accordance with the principles of human nature to conclude that it was not possible for educated and upright men to be the ministers of good to others, amid the scenes of domestic life, in the hours of physical suffering and mental anguish, without shedding around them the influence of their enlightenment, and thus tending to ele-

* See our last number, page 439.

vate the intellectual and moral condition of their country. It was with the object of conferring advantages such as these upon the people of Western India, that this College was endowed. The ends aimed at were truly important, and the principle of easy comprehension. Yet there were not men wanting who anticipated obstacles in the way of their fulfilment; who believed that there existed prejudices on the part of the people against an European system of medicine; and who questioned the aptitude of the youth of India to attain to the necessary acquirements.

"In regard to the first objection, it seems strange that it should ever have been gravely entertained—for surely it is not to be disputed, that, as a general principle, man in a state of suffering will court relief, and accept it readily, from whatever hand it comes, and under whatever name it may be presented to him. In regard to the second objection, it is amply refuted by the proceedings of this day. To what extent and in what manner the acquirements of these young graduates have been tested it is not my province to explain, for it has been wisely ordered by the rules of the College that the final examination shall be conducted and reported upon by officers unconnected with it."

The prosperity of this College is, we believe, in great part due to the Principal, Dr. MOREHEAD, who is well known in Europe for his excellent contributions to medical literature, and who appears to have earned a high reputation at Bombay by his activity, benevolence, and zeal, in the management of the affairs of this Institution. His spirit of justice, mild demeanour, and personal attention to the interests of the students, have won for him that respect which, to use the language of the Chief Justice, Sir Erskine Perry, who presided on the occasion, no lapse of time or change of situation will obliterate.

We have read Dr. Morehead's address to the students on this interesting occasion, and we here transcribe a few extracts from it. The advice which he therein gives to the native students of

India, may fairly serve for the basis of some of our October Introductorys now in process of manufacture for English students. Gentlemen in want of materials for an introductory lecture cannot do better than follow the example thus set them by Dr. Morehead:—

"You well know that all human pursuits, whose aims are good and useful, rise or fall in their character according *to the intellectual and moral endowments of those by whom they are cultivated*. Of no pursuit is this more truly the case than of the profession of Medicine. When studied and practised by scientific and conscientious men, it is indeed a noble pursuit. Reflect calmly on its aims, consider its acts, and you will find it impossible to view it in any other light than this. Should, however, doubts still linger in your minds, then turn to the pages of its history, and a glance at these will convince you that they are filled with the names of many who rank among the distinguished in the world's history for intellectual and moral greatness.

"Whilst this is the true aspect in which the profession of medicine should always appear, it is not, however, to be denied, that in the hands of the ignorant, the avaricious, the selfish, this noble pursuit may, often has, and always will, become a degraded and injurious trade.

"It would be ungenerous in this hour of triumph and congratulation to seem to augur ill of those whose career, hitherto, has been one of continued promise and success. But I have been led to make allusion to this, the true point of view from which the profession of medicine should be regarded, rather with the object of suggesting reflections to the minds of those who do not care to think of these things,—who do not clearly understand why it is that the art of medicine has been from time to time a favourite theme with the satirist,—who fail to perceive that the profession of medicine is brought into relation with human nature in its hours of physical suffering and mental weakness; and that while this relationship is an arena suitable for the exercise of our best faculties and affections, it is also one most favourable for the dishonest practices of the ignorant pretender. It would be well were these facts more

generally and more clearly borne in mind,—it would tend to a more just appreciation of an honourable and useful profession, and serve to silence the flippant comments of uneducated and unthinking men.

“There is still a subject to which I would invite your attention, and on which I would venture to offer to you a few words of caution. You must carefully guard yourselves against feeling disappointment if you do not so soon as you wish, or perhaps so soon as you deserve, *attain to that degree of professional success* which the sanguine expectations of youth, or the partial judgment of friends, may have led you to anticipate. Bear in mind that you are at present like well-trained coursers prepared and ready to start for the race—but that there must be time, much effort and endurance, before you can hope to reach the goal. Never forget that the life of a medical man, if *rightly* spent, is one of constant study and observation, and progressive improvement. Each year as it passes finds him wiser and more capable of performing the important duties of his calling. And this truth, which, rest assured, will in the course of years become a conviction of your own minds, is not unknown to others. Fix these principles in your minds—never rest satisfied with your acquirements. Always look beyond to some point of knowledge to which you may endeavour to ascend; and under the guidance of rules of action such as these, with patience, perseverance, just humility and integrity, you may be sure that the time will come when your success will equal all just and reasonable expectations.

“Thus, then, you will not fail to have observed, that in all that has been said to you this day, there has been no attempt to give you the impression *that the season of labour is over and gone*. And in this does it seem to you that there is ground for complaint? Is it hard, that after years of arduous application in College there should be yet no promise of repose,—that you should be yet required to labour on and on, without any prospect of its coming to a close? Such, I feel assured, cannot be *your* reflections. It is indeed a great privilege which members of the medical profession enjoy above most others, that study as they may *there is always something beyond, to which the mind may*

direct its energies. Why this is to be desired, you need not to be told, for you already well know that human happiness is not to be found in hours of idleness and scenes of pleasure, but in the regulated and steady application of our mental powers and affections to subjects of usefulness to others.”

We shall add to these extracts a part of the address of the Chief Justice, as they contain some sound and excellent advice by which both students and practitioners may profit.

“The next great moral duty incumbent on the medical profession is that of *inviolable secrecy* in the confidence bestowed on you by your patients. There is something to a delicate mind most repulsive in the idea that the various infirmities which flesh is heir to, and which have necessitated the calling in of the physician, should be made the subject of ribald remark, and idle tittle-tattle in a bazaar. Be assured that as your success in professional life must depend much on the opinion entertained of your good sense, good taste, and good tact, that any sins in the direction I have mentioned will redound severely against you.

“A third duty capable of being discharged by the medical practitioner with great advantage to society, arises from the position of trust and confidence which he fills in a household where he usually enters as a benefactor. When some loved relative is on a sick bed, and the whole family is tortured by the sight of symptoms they cannot account for, and pains they are unable to assuage, the visit of the physician is carefully looked for, and his footfall listened to with breathless interest, as the harbinger of relief to the sufferer. It is not surprising that in such situations, and at such a crisis, the influence of the physician should become preponderating; and it is easy to understand the jealousy of all systems of law, or prohibitions in some, *against death-bed bequests to the medical attendant*. But the influence they acquire may be—nay, ought to be—legitimately employed in prompting to those duties which nearly every man possessed of fortune and family has to discharge before his death; and for this end, a knowledge of the legal form of the country requisite for

testaments is a most valuable adjunct to the physician."

So long as the Grant Medical College is presided over by a principal like Dr. Morehead, and so long as it is supported by men like Sir Erskine Perry, its prosperity is secured, and the benefits of such an institution will be ultimately felt in every part of our Indian empire.

IN our last week's number (page 438), we inserted a short report of a trial for child-murder, which has recently taken place at the Liverpool Assizes. Our object in adverting to it, is to show the extraordinary latitude which counsel are sometimes allowed to take in conducting a defence on these occasions. It was proved by the medical evidence, that when the body of the child was found, it was doubled up like a ball: there was a thin cord tied round the neck, and its feet were tied to its neck. The surgeon who examined the body, and to whose competency no objection appears to have been taken, deposed that from the post-mortem examination, the child had, in his judgment, been *born alive*, that it had died from *strangulation*, and that the cord round its neck had caused the strangulation. Notwithstanding this clear evidence, the learned counsel for the defence was allowed to tell the jury that *all the appearances* found on the child were consistent with its having been *born dead*. Thus, we are led to infer, that it is quite a natural condition for a child to be born with a string tied round its neck, tightly enough to produce what is called strangulation in a breathing child—and with its feet tied to its neck! The Prisoners' Counsel Act was passed some years since, under the pretence that it was absolutely necessary for the purposes of *justice*! A defence like that above mentioned, shows a gross and scandalous abuse of the privileges conferred by the Act.

If this license of counsel is to be continued—if any legal gentleman, unacquainted with medical science, who happens to be retained for the defence, is to be permitted to contradict, on his own bare statement, a *medical opinion based on facts*, then it is the height of absurdity to put females on their trial for child-murder, or to call for medical evidence in support of such charges. The Prisoners' Counsel Act, thus carried out, instead of aiding justice, will actually defeat it, by leading to the escape of a large number of criminals.

EXPERIENCE tends to show that even when properly carried out, a School of Practical Chemistry has hitherto proved, in a financial point of view, a complete failure. The ROYAL COLLEGE OF CHEMISTRY maintains its ground, not by the fees of pupils, but by the contributions of a number of liberal-minded persons who have thus combined to promote what they consider a public benefit. The Practical Laboratory of the PHARMACEUTICAL SOCIETY, in spite of a very fair amount of support, is stated to have always been a heavy drain upon the funds of the Society. As to the Practical Chemistry Courses of the LONDON HOSPITAL SCHOOLS, called into operation during the last summer by the rules of the Apothecaries' Society, it may be safely said, that if institutions like the College of Chemistry and the Pharmaceutical Society, consisting of many hundreds of annual contributors, cannot succeed in making their laboratories self-supporting, there is still less chance of success among schools in which the number of pupils is necessarily limited. It is our belief with respect to these private courses that one of two results has followed the new regulation of the Apothecaries' Society,—either the Practical instruction has been nominally given, with but a scanty supply of ap-

paratus and chemicals, and therefore with but little benefit to the pupil; or the instruction has been afforded on a liberal scale, and the funds of the school have suffered proportionably. The question necessarily arises—Is a fresh fee to be levied on the pupil, or is an annual deduction to be made from the fees paid for other courses of lectures? On the one hand it may be said medical education is already very expensive; but, on the other, fees for lectures are now so reduced by competition, as to render any fresh charge upon the funds a serious injury to those engaged in teaching. Unless these Practical Laboratories are by some means or other made self-supporting, it cannot be expected that success will attend them. The present plan leads to the imposition of a pecuniary fine on all the professors connected with a school, and throws upon them an additional amount of work, which they must either undertake among themselves, or pay others for undertaking. There can be no doubt that the benefit of the arrangement is conferred on the pupil, and the injury is unwittingly inflicted upon the Professors by the Apothecaries' Society.

WE must join our voice to that of our contemporaries in reference to the open and palpable encouragement which the English law affords to those non-professional persons who have ignorantly trifled with human life. A man was lately tried and acquitted at the Old Bailey on the charge of having caused the death of a boy by administering to him a noxious vegetable powder. It was not clearly and distinctly proved that the boy had died from the effects of this powder, and the prisoner was consequently acquitted.

In charging the jury, Mr JUSTICE WIGHTMAN observed that—

“It would be very hard indeed upon a medical man, or *any other person*, if, because the patient he was attending died, he was to be subjected to a charge of manslaughter; and, if it were to be so, very few men (including of course ‘other persons’ besides medical men: ED. GAZ.) would like to incur the responsibility of practising the science (?) of physic.”

The “other person” who was accused of manslaughter in this case happened to be a *Potato-salesman*: we must therefore suppose that it would be a great hardship on *Green-grocers* generally to charge them with manslaughter, because individuals who are foolish enough to swallow powerful medicines prescribed by them, happen to die; and further, that under such a state of things, there are very few green-grocers who would like to incur the responsibility of practising the science of physic! This inference may be in accordance with strict law, but we think most grown-up persons who take a common-sense view of such matters, will agree with us, that the hardship is more likely to fall on the ignorant and confiding public, than on the rash dealers in vegetables.

In this extraordinary charge we are further told:—

“It might appear to be improper to administer such medicines in a case where the stomach was already in a state of inflammation, yet there did not seem to be any evidence to show that the *prisoner* (*i. e.* the Green-grocer) was aware of the fact.”

The law (as laid down by Mr. JUSTICE WIGHTMAN) here assumes that Green-grocers in general (and the Potato-salesman in particular) could not be found guilty of manslaughter in dabbling with physic, unless evidence were adduced to show that they were fully aware of the existence of latent disease, which would render the use of their medicines dangerous! Is the maxim of *ne sutor ultra crepidam* so completely exploded,

that in death from the exhibition of noxious drugs by uneducated persons, it is henceforth to be an argument in favour of their exculpation that they did not know of the existence of a disease which none but those who have received a regular medical education can be supposed competent to detect and recognise? If an apprenticeship to the green-grocery trade does not impart to a man a knowledge of medical diagnosis, and if no medical man be consulted by the green-grocer, we should be glad to know how that species of evidence which Mr. JUSTICE WIGHTMAN holds to be absolutely necessary to a conviction in such a case, is to be procured.

We have a recognised body of licensed pilots well acquainted by education and practice with the shoals and quicksands of the Thames and the British Channel. One of these men may, by some accident which no exercise of skill could prevent, wreck a vessel and lead to the loss of life. He is tried for manslaughter and justly acquitted, because he had done all that human power and skill could do to avert an evil of the existence of which he was aware. A "green-grocer," falsely representing himself as a pilot, undertakes to navigate a vessel, and deludes the captain and crew with a perfect idea of his competency for the task. The vessel is wrecked, a life is lost, and the false pilot is tried before Mr. JUSTICE WIGHTMAN on a charge of manslaughter. The learned judge tells the jury that "it would be very hard on a regular pilot, or *any other person*, if he were to be subjected to a charge of manslaughter, because a ship was wrecked and a life was lost while it was under his care. If it were so, very few men would like to incur the responsibility of undertaking the pilotage of vessels. The course which this man had steered was certainly improper, yet there was no evidence to show that he

was aware of the existence of the shoal upon which the vessel was wrecked "

Have we overstrained the analogy? We believe not. It is just as important to the lives of the public that a man who, without education, presumes to prescribe powerful medicines, should be able to recognise those cases in which they will necessarily place life in danger, as that a person who undertakes to pilot a vessel should be aware of the unseen dangers of the river or sea which he navigates. For this reason we condemn the law, if it be law, as conferring a most dangerous encouragement on all classes of quacks. It is an outrage on justice and common sense, and is opposed to those principles of law by which life is protected on railways, in steamboats, in the construction of buildings, and in all trades in which injury to life and limb may occur through unskilfulness. In all cases, except in reference to the practice of medicine, incompetency and rashness arising from ignorance receive their due punishment. On pretenders to a knowledge of medicine, according to the law as here expounded, the object appears to be to confer entire impunity for fatal results.

WE lately made some remarks on the propriety of establishing an ASYLUM in this country for the special reception of all persons charged with criminal offences who have been acquitted on the ground of insanity. It is satisfactory to know that Lord Shaftesbury, as Chairman of the Commissioners of Lunacy, intends to bring this subject before the House of Lords at an early period of the next session: and we have no doubt that the advantage of the plan, which has been already conceded to Ireland, will be extended by an act of the Legislature to England and Scotland.

Dr. Boyd, of the Somerset Asylum,

who has written on this subject, justly observes that a difference ought to be made between an *Asylum* and a *Prison*, and adduces the following cogent reasons for an immediate change:—

“In the second place, allowing criminal lunatics the same amount of liberty which is considered requisite for the comfort and successful treatment of the other patients, affords the former many opportunities of effecting their escape; thus leaving society open to violence and wrong at the hands of individuals who are quite aware of the fact of having a plea to shield them from the penalties attached to crime. The Commissioners of Lunacy have brought this subject under the consideration of the Home Secretary; and, from their fifth report, it appears that there were 364 criminal lunatics in confinement last year, one of whom contrived to escape no less than six times from a licensed house.

“In the third place, there are instances on record of criminals who have either escaped the hands of justice by feigning insanity, or been acquitted of crime on the ground of insanity, who have subsequently appeared in full mental vigour, and, finding themselves imprisoned for an indefinite period, become desperate, and induced to exert all their energies in creating disaffection in the minds of the other patients, and materially interfering with the successful treatment of these, and with good order in the asylum.”

The force of these objections to the present loose system of associating criminal lunatics of every degree with those who have committed no crime, is so obvious that we do not think the proposed measure can meet with serious opposition.

THE CHOLERA IN JAMAICA.

NEWS from Jamaica up to the date of August 11, makes no special reference to the condition of the island with respect to cholera, from which we draw the inference that the ravages of the disease have in a great degree subsided. It is simply announced that cholera had broken out among the troops stationed at Newcastle, and that in certain districts the small-pox was very prevalent.

Reviews.

Lectures on Clinical Medicine. By JOHN HUGHES BENNETT, M.D., F.R.S.E., Professor of the Institutes of Medicine, and of Clinical Medicine, in the University of Edinburgh.

WE have before us the fourth part of these valuable lectures, its subject being Diseases of the Nervous System. The consideration of these is preceded by a brief account of the structure, arrangement, and functions of that system. The author lays down the following generalizations on the pathological laws which regulate diseased functions of the nervous system:—

“1. The amount of fluids within the cranium must always be the same so long as its osseous walls are capable of resisting the pressure of the atmosphere.

“2. All the functions of the nervous system may be increased, perverted, or destroyed, according to the degree of stimulus or disease operating on its various parts.

“3. The seat of the disease in the nervous system influences the nature of the phenomena or symptoms produced.

“4. The rapidity or slowness with which the lesion occurs influences the phenomena or symptoms produced.

“5. The various lesions and injuries to the nervous system produce phenomena similar in kind.”

Dr. Bennett illustrates these several propositions by practical remarks, and by the narration of several cases which had come under the notice of his audience during the session 1850-51.

We must remark in passing that the first law laid down by Dr. Bennett invites criticism at our hands, inasmuch as it revives a theory which is regarded by many eminent physicians and physiologists to have been demolished by the masterly treatise of Dr. George Burrows on the Circulation in the Brain. Dr. Bennett quotes Drs. Monro, Kelly, Abercrombie, and Reid, in support of the opinions which he seeks to revive, and which he thus states:—

“The views adopted by these distinguished men were, that the cranium forms a bony spherical case capable of resisting atmospheric pressure, the only openings into it being the different foramina by which the vessels, nerves, and spinal cord pass.

The encephalon, its membranes and blood-vessels, with perhaps a small portion of the cerebro-spinal fluid, completely fill up the interior of the cranium, so that no substance can be dislodged from it without some equivalent in bulk taking its place. Dr. Monro used to point out that a jar, or any other vessel similar to the cranium, with unyielding walls, if filled with any substance, cannot be emptied without air or some other substance taking its place. To use the illustration of Dr. Watson, the contents of the cranium are like beer in a barrel, which will not flow out of one opening unless provision be made at the same time that air rushes in. The same kind of reasoning applies to the spinal canal, which, with the interior of the cranium, may be said to constitute one large cavity, incompressible by the atmospheric air" (p. 143).

The result of the opinions and inquiries of these experimenters was the conclusion that there must always be within the cranium the same amount of fluids, whether those fluids be blood, serum, or pus. At the same time, they admitted that local congestion might take place, by which portions of brain may be unequally pressed upon, and so made to contain a small quantity of blood, but that the whole quantity always remains the same, and cannot be lessened by venesection.

These views, it is well known, obtained a very general reception throughout the profession, until Dr. George Burrows proved them to be erroneous, and demonstrated positions the very reverse, in a work which has with justice been regarded as a model of medical inductive reasoning.

Our limited space forbids our entering fully into the arguments and experiments adduced by Dr. Burrows, but we shall notice some of the chief points of the inquiry. The experiments related by Dr. Burrows prove beyond the possibility of contradiction that the actual quantity of blood in the brain may be lessened. This fact, indeed, was not disputed by Dr. Kellie, who says, with reference to one of his experiments,—“These brains contained, beyond all doubt or dispute, a much larger quantity of red blood than the brains of any of the animals that had been bled to death;” and “These comparative experiments afforded us the most satisfactory proof that the other brains had been really depleted by bleeding,

and their vessels drained of a very sensible proportion of the red blood usually contained by them.”* The exsanguine appearances of the brain, in some of Dr. Burrows's experiments, as compared with its intense hyperæmia in others, were so evident and unmistakeable, as to admit of no other explanation than that the quantity of blood did truly vary under these opposite conditions. To say that the displaced blood in the one case was supplied by serum, or by resiliency of the brain, is merely to make, in other words, the very admission which is at the same time denied. It is at best but an assumption, to assert that, when the quantity of either kind of blood is diminished, it is replaced by an increased amount of the other, or by serum.

We must not omit to observe that Dr. Burrows's views have been adopted by Dr. Watson, whom Dr. Bennett quotes on the opposite side, although he subsequently states that Dr. Watson has admitted the validity of the conclusions arrived at by Dr. Burrows. Most of the eminent physiologists and pathologists of the present day also concur in these views. Indeed, it appears somewhat surprising that so much stress should have been laid upon the contrary theory—a theory not consonant with the laws of hydrostatics and pneumatics, which are nevertheless appealed to in its support. The merest tyro who has studied the bones of the skull, and has made himself acquainted with its foramina and fissures, would recognise the physical impossibility of the transmission of the blood through the vessels of those foramina were the internal state of the cranium that of a vacuum: the vessels would necessarily be so compressed that no blood or other liquid could pass.

The open condition of the fontanelle during infancy affords, moreover, abundant means of observing, both by the sight and by the touch, that the quantity of blood is absolutely liable to variation. Dr. Bennett states that he has entered somewhat fully into this theory “because, independently of its vast importance in a practical point of view, it is one which originated in, and has always been maintained by, the Edinburgh School of Medicine.” This, however,

* Medico-Chirurgical Transactions of Edinburgh, vol. i. p. 115.

we hold to be no reason for attempting to maintain an untenable hypothesis, whilst at the same time the very expressions which the author employs in explaining the pathology of diseases of the nervous system, involve the conclusion of the true theory of the state of the circulation in the brain.

The cases of nervous disease, and their accompanying commentaries, are highly instructive, as are all the practical observations of Dr. Bennett.

The next section contains observations "on certain conditions of the cerebral functions, in which individuals of sound mind are liable to be temporarily influenced by predominant ideas." In these observations the author offers a very probable and intelligible explanation of the phenomena of mesmerism. We have freely quoted from Dr. Bennett's remarks in our notice of Dr. Gregory's "Letters to a Candid Inquirer on Animal Magnetism," and shall, therefore, not further dwell upon them on the present occasion.

In his next section the author treats of the application of the microscope to the detection of nervous disease, and points out that pathologists have confounded softening of the brain dependent on inflammation, with that occasioned by violence or post-mortem changes. The author relates some instances which establish the position that inflammatory softening which has existed during life has often escaped detection.

We have much gratification in repeating the high estimate which we place on the practical value of these clinical lectures by Dr. Bennett, and in expressing our conviction that, when completed, they will form a body of medical science of the greatest utility to the student and practitioner.

A Medical Man's Plea for a Winter Garden in the Crystal Palace. Pamphlet. 8vo. pp. 16. London: Van Voorst. 1851.

In addition to the numerous arguments already brought forward, for the maintenance of the Crystal Palace as a Winter Garden, the author adduces those which he considers, "of all others, were most likely to influence the thinking portion of the London public in its decision."

The author's arguments are briefly as follows:—The statistics of the Regis-

trar-General show that the mortality of London is higher than that of England at large, *ergo* London is more unhealthy than the country generally (he does not say, however, than other towns). This unhealthiness is chiefly shown in diseases which result from an insufficient supply of pure air to the inhabitants; and these diseases, *e.g.* tubercular phthisis, with other affections of the respiratory organs, and the diseases of children, are most rife in the densely populated parts of the metropolis; therefore it is necessary to provide protected exercising localities where the people may breathe pure air, as it is impossible to alter materially the present position of the streets of London.

By the conversion of the Crystal Palace into a Winter Garden, the author informs us we shall secure "a protected exercising ground, having a moderate and standard temperature, and a constant hygrometric condition, during the five months of the year that our children are immured in the nursery, and our invalids hermetically sealed up in their chambers."

In our opinion, however, the author has admitted several fallacies into his conclusions, and passed over some difficulties that are fatal to his plea.

In the first place, the evils that he has quoted as afflicting the London population, are, upon his own showing, to be found in greatest force in the most densely populated neighbourhoods; now the poor of these districts are precisely the very persons, who would (except occasionally), by reason of the distance of their dwellings, want of time, and money, be debarred the use of the Winter Garden. Or, supposing these classes to use it for the purposes indicated by our author, would its atmosphere retain its purity many hours when respired by such numbers from such quarters?

As for its utility in liberating our children from being immured in the nursery during five months of the year, we consider, notwithstanding all that has been advanced to the contrary, that those children whose parents can give them the advantage of a nursery at all, are quite as well protected, and better, therein, from atmospheric causes of disease, than by exposure to extreme changes of atmospheric temperature in their transit to and from hygrometric and other meteorological vicissitudes

on their exit from the Winter Garden. The same reasoning applies *à fortiori* to invalids; and, moreover, we suspect that it will be equally found to apply to the healthy.

However delightful it might be to be able to enjoy, at all seasons of the year, the beauties and magnificence of the vegetable world, indigenous and exotic, in so vast a national conservatory, we are not desirous of seeing the Crystal Palace retained for the purposes suggested. At all events, if a medical argument be submitted to us in advocacy of the Winter Garden, it becomes our duty to subject it to the rules of medical reasoning—tried by which, we cannot admit the validity of the plea now before us, even could we entirely believe that this pamphlet is the production of a medical man, which its obvious fallacies almost lead us to doubt.

Case of Aneurism of the Aorta, arising from the back part of the Arch, simulating Laryngeal Disease, and fatal by Suffocation. By W. T. GAIRDNER, M.D., F.R.C.P., Pathological and Assistant Physician to the Royal Infirmary of Edinburgh. (Reprinted, with an additional note, from the Monthly Journal of Medical Science for August 1851.)

THE points of interest in this case, and on which Dr. Gairdner was induced to submit it to the consideration of the Edinburgh Medico-Chirurgical Society, are—first, the absence of physical signs of the disease, and the prominence of symptoms of laryngeal affection; secondly, the free communication of the sac with a mucous canal (the trachea just above the bifurcation), without causing serious hæmorrhage; thirdly, the termination of the disease by suffocation, and the remedial measures suggested by this termination. The patient died about a quarter of an hour after tracheotomy had been performed, to which he had obstinately refused to submit until death was inevitable, which had been threatened by, and at last was found to have resulted from, pressure of the sac on the recurrent nerve of the left side.

Dr. Gairdner's appended observations are practically instructive, and demonstrate beyond the possibility of contradiction, that there are cases of thoracic aneurism in which tracheotomy is the only means of prolonging, or of saving, life.

Proceedings of Societies.

NEWCASTLE AND GATESHEAD PATHOLOGICAL SOCIETY.

February 1851.

DR. CHARLTON read the following communication:—

On the 29th October, 1850, I was requested to see a lady, æt. 60, residing in the country, who had been seized that morning with spasms in the stomach, vomiting, and incessant retching. On examination of the bowels, I found them moderately supple; no pain on pressure; pulse small and quick; constant vomiting and retching, which has continued for the last fourteen hours: the bowels have not been opened for twenty-four hours. Purgatives were accordingly ordered, and produced no effect, save augmenting the sickness. Enemata were then given, but they brought away each time only a faint trace of feculent matter. The patient was tormented with incessant thirst; the pulse was small and weak, and about 100. Every effort to obtain passage through the bowels was unsuccessful: croton oil was rejected, and enemata were returned, without producing any effect. The bowels, however, were in a state of constant commotion; large coils of intestine would rise up under the hand, and struggle, as it were, to be freed. These movements usually terminated in a fit of retching or vomiting, by which the patient was terribly exhausted. On the fifth day fecal vomiting set in; the matters rejected were dark brown, fluid, and intensely fecal in their odour, and the patient's strength declined almost hourly. In this hopeless condition I obtained the consent of the friends, and of the lady herself, who exhibited uncommon firmness throughout, that nothing further should be done to irritate the intestines; that ice should be freely taken by the mouth, but no food or medicine; and that the patient's strength should be sustained wholly by nourishing enemata of beef-tea. This was on the 4th of November. The retching now gradually subsided; the bowels continued to be a good deal distended, but were still not painful on pressure. Ice afforded great relief to the thirst. Small quantities of fecal matter were vomited for two or three days, but these too ceased, though the bowels were still obstinately closed. The patient continued for six days then free from suffering, but extremely exhausted, till the nurse informed me on visiting her on the

10th of November, that after much rumbling of the bowels during the preceding night a large quantity of flatus had passed, and that the bowels were less distended. Finding this to be the case, I regarded it as an indication for further proceedings, and ordered magneto-electricity to be applied: it produced slight vomiting, and much commotion in the bowels, but five hours after a copious evacuation by stool of hard scybalous matters. During the night the patient had a still more copious evacuation; and the next day she ventured to take a small quantity of beef-tea, which produced no sickness. The pulse now increased in strength and diminished in frequency, and she gradually regained her health in about ten days after this date, having had no untoward symptoms subsequently. The above case will tend to illustrate still further the advantages of delay in cases of this nature, and the utter inutility of employing severe purgatives where symptoms such as we have described prevail. It is best to trust to Nature, and not to attempt to force a passage by violent measures.

A copious evacuation took place, which was soon after followed by two or three of a similar character. The matters passed were not particularly hard, nor did they produce any pain. The patient soon after ventured to take small quantities of beef-tea, cautiously at first; but as all feeling of nausea disappeared, she was soon able to partake of more solid food. Her convalescence was as speedy as could be expected from a person of her age, and she has since enjoyed very good health. I had not read, at the time that the "expectant" method of practice was adopted in this case, the very sensible remarks on the danger and inutility of persevering in the use of drastic purgatives after all ordinary methods for obtaining passage through the bowels have been tried and have failed. It is seldom, however, that the patient or the patient's friends will be satisfied with such a plan of proceeding, and least of all in England, where medicine is called for from sheer custom, and where little note is taken of the skill of the physician if he be not vigorous and decided in his treatment. It was the simple conviction in my mind, that to administer more drastic purges would only irritate the mucous membrane of the bowels, and, by producing vomiting, tend still further to exhaust her strength, that hindered me from following the usual routine in this case. It was fortunate that we were allowed without complaint to pursue our course; and the admirable tranquillity of the patient under the prospect of impending death no doubt contributed much to the favourable termination of the case.

The passage of flatus immediately awakened our hopes, and induced us to try magneto-electricity; and this we recommended partly under the supposition that the long constipation might have induced considerable loss of power in the coats of the intestines. It is quite possible that the bowels would soon have acted by themselves, but the application of magneto-electricity probably accelerated their movements. Of the real nature of the obstruction in this case it is difficult to form any opinion: we do not believe that a volvulus was present, for no tumour could be discovered in any part of the bowels by the most careful examination at any period of the attack.

18th June, 1846.—A young girl, aged 17, had been subject for two years to attacks of violent colicky pains in the abdomen, with vomiting and distension of the bowels, all of which symptoms were quickly relieved whenever copious fluid evacuations from the bowels appeared. She first menstruated at the age of 14; but for the last two years and a half the menses have been absent: she became much emaciated, but the appetite remained pretty good. When I first saw her the pulse was quick and small, and about 100 beats in the minute; the legs and feet were slightly œdematous; there was considerable tympanitic distension of the bowels, but she complained of little or no pain on pressure. She had the day before, however, complained of severe pain in the region of the cæcum. Percussion gave a perfectly clear sound all over the intestines. The bowels had not been opened for twenty-four hours.

The next day, after an enema of castor oil and Tinct. Assafoetid. had been administered, the bowels were very freely opened, and much flatus was passed. I then detected with the pleximeter marked dulness in the right hypogastric region. From this time till the day of her death, on the 25th of June, eight days after I had first seen her, the symptoms assumed the character of low typhoid fever; the bowels were frequently moved, and the stools for the last day or two were passed in bed; but she was sensible up to the time of her death.

Post-mortem examination 28 hours after death.—Body much emaciated; abdomen slightly distended; no outward signs of putrefaction; lungs healthy; the pleura of the right side exhibited two or three slight adhesions by bands of coagulable lymph, and the same was the case on the left side to a greater extent. These adhesions were obviously not of recent date; they were moderately firm, and the pleura exhibited no traces of recent inflammation; the dia-

phragm was pushed very high up into the chest; liver large and light-coloured; heart small and soft. On opening the abdominal cavity, the intestines appeared much distended with gas; the colon lay in its natural position, and was healthy throughout; within the ileo-cæal valve there was an ulceration exactly similar to those which occur so constantly in the "fièvre typhoïde" of the Continent: it occupied nearly the whole circumference of the bowel, and had nearly destroyed the mucous membrane there, save in a few small patches; the valve appeared to be narrowed, but not entirely closed. About seven inches higher up the ilium, was another ulceration of similar character; and beyond this, six inches further, was a point which gave way on our first handling the intestine, and allowed the enormous quantity of liquid matter which we had observed to be accumulated in the upper part of the ilium to escape. This rupture of the bowel, however, had evidently not taken place during life, as there were no signs of peritonitis. At this point there had evidently been a stricture of the intestine, though the exact calibre of the passage could not be accurately determined, from the laceration that had taken place. It appeared to me not to be larger than to admit a goose-quill. Above this point, the coats of the ilium, for an extent of eighteen inches, were greatly thickened, so as to cut almost like cartilage; but this thickening was evidently only from hypertrophy of the muscular coat of the bowel, and was analogous to the appearance presented by the coats of the stomach in cases of narrowing from any cause of the pyloric orifice, and which has been so often mistaken for scirrhus degeneration. The whole of this part was enormously dilated, so as to resemble in size the human stomach; and a portion of the mucous lining of the dilated part was deeply ulcerated, the ulceration extending two inches in length by five in breadth—viz., in a direction perpendicular to the axis of the bowel. This sac or dilatation of the ilium contained ten or twelve plum or damson stones; and close to the stricture were three or four deep oval cavities, into which some of these stones accurately fitted, though we did not find any of them lying therein at the time of the examination. The mesenteric glands were considerably enlarged; the other viscera were in a normal state.

REMARKS.—It is curious that the malady of this patient assumed during the week that preceded her death the exact character of the abdominal typhoid fever so common in France and Germany, but which rarely is met with in this town. It might be

surmised that this really was the complaint of which the patient died; but the stricture of the bowel, and the enormous dilatation and hypertrophy of the sac above it, forbid us to entertain this opinion. I subsequently ascertained that for eighteen months previously the patient had suffered from frequent distension of the bowels, with violent colicky pains, and could only obtain relief by the free use of saline purgatives. The parents of the girl were grocers, and I was told that she frequently swallowed plums, &c., without extracting the stones. It is possible that the disorder commenced by an accumulation of the stones in this part of the intestinal canal, where they produced ulceration, and the reparative process proceeding too actively, narrowed too much the calibre of the bowel, and so produced the stricture. The muscular coats of the intestine became subsequently thickened and dilated in their efforts to propel the matters collected in the sac through the constricted portion, while saline medicines, by liquefying feces, would enable them to pass more easily through the same part.

August 15th, 1847.—Mrs. E——, æt. 24, had been indisposed for about a week, complaining of slight sickness, and of some pain in the bowels. This morning at twelve, violent vomiting, with excessive prostration, suddenly came on. During the previous day the pulse had been full and strong, and she complained much of severe pain in the right iliac region, and the bowels were somewhat tender to the touch, though she felt relieved by pressure on, or by lying upon the abdomen. At 6, P.M., the pulse was 120, exceedingly small and feeble; the hands and face covered with a cold clammy perspiration, and the feet icy cold.

On examining the abdomen I could discover only one part painful on pressure, and this was a point midway between the umbilicus and the epigastrium. The bowels were freely moved yesterday. Vomiting occurred to-day almost immediately after taking either fluids or solids.

The next day she felt better, but the pulse was still miserably small and very frequent, and the cold perspirations continued. No evacuations could be obtained by the most powerful enemata, and medicines given by the mouth were speedily rejected. No tumour could be detected by the most careful examination of the abdomen: the matters vomited had no fecal smell, but there was evidently obstruction somewhere in the course of the intestinal canal. During the night she became more restless, and when we saw her in the morning she was evidently sinking, and she died at half-past 11 P.M.

Post-mortem thirteen hours after death.

—Organs of thorax perfectly healthy. On opening the cavity of the abdomen several coils of intestine appeared much inflated, and of a purplish-pink colour. The omentum extended very far down into the pelvis, and was remarkably loose, but in no wise inflamed. In the right iliac region one of the deep-coloured convolutions of the small intestine was attached by recent adhesions of coagulable lymph to the parietal peritoneum, and here, too, the intestines were slightly glued together by recently effused lymph. The cause of the distension was found to be, that a portion of the mesocolon was found to be thrown across a portion of the jejunum, so as to form a perfect ring of constriction, through which the small intestine could not propel its contents. There was but slight inflammation at the constricted part, but no force could drive either air or fluid through the bowel until it was released. The mucous lining of the jejunum, above the stricture, was thickened and congested.

The rest of the bowels were in a perfectly normal condition.

REMARKS.—This case presents some interesting features. In the early stage of the affection pain was felt in the part where the stricture was afterwards discovered,—viz., in the right iliac region, but this was relieved by pressure, and the bowels were pretty freely opened till within three days of the patient's death. We think that the incarceration of the bowel may have been at first only partial, but that gradually the passage became entirely obstructed. Yet after this the patient complained of no pain of any amount, nor was there any marked distension of the abdomen. The parietes of the abdomen, I may observe, were greatly loaded with fat. The above is a fair example of the first form of internal hernia, as described by Rokitansky, where a portion of intestine with its long loose mesentery is compressed between the colon and the firm unyielding spinal column and posterior walls of the abdomen. The more the intestine was distended the more would it press upon the loop formed by the transverse mesocolon.

Dr. HUMBLE narrated a case of

Abscess of the Liver, communicating with the Right Lung, and also with the Pericardium.

C. S.—, aged 36 years, was admitted into the Fever Hospital on the 10th day of August, 1847. Had been a soldier, and much in warm climates. His present attack is of three weeks' duration. He complains of headache, languor, and general uneasi-

ness, with considerable thirst. His tongue red and dry; pulse 112; respiration easy; no cough; skin hot and dry; bowels confined. He was ordered a dose of castor oil, and a diaphoretic mixture. Next day his symptoms were much relieved, but his tongue was still dry and slightly furred. He was ordered six grains of mercury with chalk at bed-time, and to go on with his mixture. He continued to improve, his febrile symptoms gradually declining, until the 22d day of August, when he seemed much depressed in spirits, but complained only of debility. His skin was cool, tongue clean and moist, pulse 90, soft and regular, and his bowels open. To have wine three times a-day, and full diet.

On the 25th he was sitting up; his appetite was good; he was much more cheerful, and feeling better in all respects; but at 8 o'clock next morning he suddenly died. He was examined ten hours after death. The heart was found slightly hypertrophied, and its cavities dilated; all the valves were healthy; the serous surfaces of the pericardium were coated extensively with coagulable lymph, and its cavity contained a large quantity of pus, derived apparently from a communication through the diaphragm with a cavity in the substance of the liver, which contained purulent matter. This cavity also communicated with the inferior lobe of the right lung, which was hepatized, and contained various sinuses running into each other. The upper lobes of this, and the whole of the left lung, were healthy in structure. The abdominal organs, excepting the liver, were healthy.

This case occurred during the great epidemic of the so-called "Irish fever," when the wards of the hospital were crowded with patients; and his symptoms being those of simple continued fever, without any indication of local disease, it was not deemed necessary to make an auscultatory examination of his chest, or the organic lesions revealed in the above examination would probably have been discovered during life. With such an amount of disease, which had in all probability existed for many years, it is very surprising that, until a few weeks previous to his death, he was able to follow his usual employment. The fatal termination seems to have arisen from the sudden eruption of purulent matter into the pericardium, as it cannot be supposed that a lesion of such importance as a large effusion of pus could have existed there without displaying unequivocal signs of its presence.

ACADEMY OF SCIENCES, PARIS.

Aug. 25, 1851.

The Cucumis Abyssinica as a Remedy for Rabies.

M. RENAULT, of Alfort, stated that he had experimented on five dogs suffering under rabies, and had not found any influence to have been exerted upon the disease by this root, which had been introduced into France by M. d'Hericourt from Abyssinia, where it is said to be used successfully as a certain cure for rabies.

Asphyxia by Submersion.

M. PLOUVIEZ, of Lille, communicated some observations upon this subject, in which he remarked that the great danger of asphyxia by submersion results from the loss of temperature, and from the introduction of water into the bronchi, and which he had found it impossible to remove by various means that he had put in practice. Among other means for restoration, the author states that small bleedings are useful by diminishing venous plethora, and so favouring the removal of the fluid by absorption.

Sept. 1, 1851.

The Share taken in Vision by the Muscles of the Eye.

M. CLAVEL read an essay, the object of which was to show that the muscles of the eye take an active part in almost all the acts of vision, and that they contribute to the modifications which the cornea, pupil, and crystalline lens, undergo during vision.

On the Rapidity of the Transmission of Impressions in the Nervous System.

M. HELMHOLTZ communicated the results of experiments, by which he arrived at the conclusion that the rapidity of the transmission of impressions in the nervous system is not so rapid as is generally believed. M. Helmholtz also states that a difference is observable in this respect between the muscles of animal and of organic life—that in the latter the interval between the irritation and the action of the muscle counts by seconds, if not by minutes; while in the former it counts by hundredths of a second.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 4th September, 1851:—John Rolston, Devonport—Thomas Henderson Somerville, Sedbergh, Yorkshire—Charles Denton Hulme, Leicester—John Le Gay Brereton, Doncaster.

Hospital and Infirmary Reports.

ST. GEORGE'S HOSPITAL.

REPORTED BY DR. BARCLAY,
Medical Registrar.

Severe Lesions of the Brain.

THE subjoined case derives interest from the association of old cerebral lesion with more recent inflammatory action, both of which may be traced as well in the history as in the post-mortem appearances. The first seizure was of an apoplectic character, attended with effusion of blood into the cavity of the arachnoid, occurring it appeared about five years before death: the laminated fibrous mass hollowed out into a cellular cavity in the interior, corresponded exactly with other preparations now in the museum of the hospital, in which the various stages are exhibited, from the first organization of the coagulated blood, until the central portion, being entirely removed by absorption, nothing remains beyond two thin fibrous layers attached on either side to the membranes between which the effusion has occurred.

The history of the case does not supply any detail of the circumstances under which the acute cerebral attack had commenced, but it did not appear that any ailment had been complained of before the incursion of the convulsive fits from which her illness was dated. That this was inflammation there can be no doubt, from the softened condition of the central structure of the brain, along with the effusion of serum in the ventricles. This condition is much more frequently met with, associated with miliary tubercles in other organs, even when tubercles are not found in the brain or on its membranes; but though the tuberculous cachexy is one of the predisposing causes, it is not the only state in which such a form of inflammation can be developed; as is proved by the instance before us.

The convulsive character of the symptoms throughout is one of its most remarkable features, because neither the incursion nor the progress of the case were such as are generally found in what may with great propriety be called acute hydrocephalus. This had to do, no doubt, with the previous lesion, especially those involuntary convulsive movements which were most marked on the paralysed side, opposite to the seat of the principal inflammatory action; for here, in addition, to the ordinary softening of the central structures near to

the ventricles, there was distinct vascularity of all the brain, and very marked softening where the cortical structure came in contact with the old apoplectic clot. It seemed not impossible that the short clonic spasms of the left arm were caused by inflammation spreading to the chord and its membranes, but no such condition was found after death. They were in no way related to chorea, but were rather such movements as would be excited by a succession of galvanic shocks passed through from the spine to the extremities: towards the close they became more severe and more prolonged.

Mary H., æt. 42, admitted into St. George's Hospital, under the care of Dr. Bence Jones, on 9th August, 1850.

The history at first obtained of this case was very unsatisfactory. It was subsequently made out with some degree of certainty that she had first suffered from some sort of fits five years before, and that on the occasion of one more severe than usual she had lost the use of the whole of her left side, which had been to a certain extent palsied ever since. She had very much recovered the use of the leg, and could walk pretty well. On the evening of the 5th she had an attack, which was described as consisting of a succession of fits, to the number perhaps of thirty, leaving her afterwards unconscious, and again completely hemiplegic. Muscular movements on the affected side began to show themselves on the day of her admission into the hospital, and consciousness was partially restored, but very imperfect. When admitted she had evidently no voluntary control over the movements of the left arm and leg; she was unable to speak or to protrude her tongue; she followed objects with her eyes as they moved about in the ward within range of her sight, but it was very doubtful whether she had any distinct consciousness; the nurse thought she recognised persons with whom she was previously acquainted. The pulse was 120, soft; face much flushed; skin rather hot. A blister was applied to the nape of the neck, and an injection administered, which was followed by almost immediate and copious evacuation of the bowels.

Through the night and next day she remained in very much the same state, with perhaps a degree of greater consciousness. But whatever her state in this respect, there continued throughout a succession of short clonic spasms of the dorsal set of muscles of the arms and legs, throwing her backwards in constantly repeated tetanoid paroxysms, differing from tetanus chiefly in the circumstance that relaxation immediately followed the spasmodic contraction.

It was found that an attempt to let

blood from the arm which had been made before her admission had failed; and the face being flushed, the pulse continuing pretty full and of good strength, she was bled to 10 ounces: a drop of croton oil was administered in castor oil, and ice was applied to the head.

The convulsive movements became in the course of the night much more severe, recurring also with greater frequency; the face became more congested; the degree of consciousness she had hitherto shown passed away; she sunk into coma, and died early next morning.

Post-mortem examination thirty hours after death.—The body was rather short and stout, and much covered with fat.

Cranium.—In the cavity of the arachnoid, at a point corresponding with the right parietal eminence, there was situated a patch of dense laminated substance, of a yellowish colour, about the size of a crown-piece, which was evidently the remains of an old apoplectic clot. In its interior was a compressed cavity which contained some scales of a silvery appearance; it could be peeled away from the dura mater, to which, however, it adhered with tolerable firmness; and it was also adherent, but less firmly, to the opposite layer of the arachnoid. The arachnoid lining the dura mater on the right side of the vertex, and also that on the right side of the falx cerebri, was minutely injected in patches, but no lymph was observed. The convolutions of the brain were rather flattened, and a small quantity of serum existed in the sub-arachnoid cellular tissue. The ventricles were much distended with slightly turbid fluid. The corpus striatum and thalamus opticus of the right side, the back part of the fornix, and under part of the corpus callosum, as well as the central portions of the right posterior lobe of the cerebrum, were considerably softened. The cortical portion of the brain throughout was vascular, and of a pinkish colour, and at that part which corresponded to the clot was much softened, and when submitted to a gentle stream of water was completely washed away from the medullary substance beneath. The cerebellum throughout was highly vascular.

Spinal cord.—The membranes of the cord were healthy; the cord itself was slightly congested, but not otherwise diseased.

Thorax.—The lungs were congested, especially the right one, and at its lower and back part. There was much fat on the surface of the heart, especially at its base; the muscular structure was flabby; the valves healthy.

Abdomen.—The kidneys were much surrounded by fat; they were slightly con-

gested, but not otherwise diseased. The other organs were healthy. There was much fat deposited in all the situations in which adipose tissue is ordinarily found.

HÔPITAL DE LA CHARITÉ, PARIS.

Experiments on the Effects of White Oxide of Arsenic in the Treatment of Intermittent Fever. By M. ANDRAL.

THESE experiments were performed in May, June, and July, 1850.

The white oxide of arsenic was given in eleven cases taken indiscriminately. In one case the fever appeared to be symptomatic of tubercular disease; in another, of some organic affection of the stomach. In almost all the other cases the disease dated within the year, and had first appeared in Africa. In one case it arose spontaneously in the hospital. In the majority of cases the ague was tertian; in

others, quotidian. The medicine was not administered until at least one paroxysm had occurred in the hospital; in some cases only after three or four fits.

In the mode of administration M. Bou-din's plan was followed—viz., in equal parts of wine and infusion of canella. It was taken five hours before the accession of the paroxysm. The first dose was generally three centigrammes (= 0.463 Eng. grs.), rather less than half a grain at a dose!

In ten cases the disease was cut short almost from the first dose. Where a second dose was required, it was often found that the first had been rejected through some derangement of the stomach. In one case, however, where the first dose failed, an emetic was given, and the disease disappeared. In one case stomachic and intestinal disorder interfered entirely with the action of the remedy. The following table shows that a considerable quantity of arsenic may be taken by persons labouring under this disease without harm result- ing:—

| | | | |
|------------------|-----------------|---------------------|-----------------|
| One patient took | 11 centigrammes | (= 1.697 Eng. grs.) | in six days. |
| Others | 15 | (= 2.315 | in twelve days. |
| " | 12 | (= 1.852 | in ten days. |
| " | 9 | (= 1.389 | in three days. |
| " | 6 | (= 0.926 | in four days. |
| " | 13 | (= 2.006 | in five days. |
| " | 6 | (= 0.926 | in " |
| " | 11 | (= 1.697 | in " |
| " | 15 | (= 2.315 | in " |
| " | 9 | (= 1.389 | in nine days. |

Generally the dose of three centigrammes (= 0.463 Eng. grs.) was administered daily or every other day. In some cases the size of the spleen decreased; but sufficient facts are wanting to determine the influence of the remedy on the spleen.

In the doses and mode in which it was administered by M. Andral, the medicine produced a sense of warmth in the stomach. This was not attributable merely to the wine, as it was experienced when the latter was not given. Sometimes vomiting occurred a few hours after the dose was swallowed. In two cases colic and diarrhoea supervened. In one case frequent mictu-

rition was noticed. In some cases headache and syncope were produced.

M. Andral considers that arsenic should be placed as next in value to quinine, and before all other remedies for ague. In answer to the question whether it should not be used instead of quinine, on account of the lowness of price, M. Andral says no. First, because it is apt to produce vomiting and other unpleasant effects in some cases; secondly, because it presents increased facilities for poisoning by rendering it possible to refer an effect to the medicine which was the result of another agency. On the contrary, *arsenic should never be employed except where quinine has failed to do good.*

GEORGE TURTON, ESQ., SHEFFIELD.

WE regret, this week, to announce the death of George Turton, Esq., one of the oldest surgeons in Sheffield. Mr. Turton was consulting accoucheur to the Sheffield Dispensary, and had for many years occupied the chair of Midwifery at the Sheffield Medical Institution, in which branch of

the profession he had, also, long enjoyed a very extensive private and consulting practice. Mr. Turton's remains were followed to the grave by many of the medical practitioners of the town, who felt that the profession had lost in him a most worthy brother, a skilful practitioner, and a truly upright man.

Correspondence.

A NEW REMEDY FOR CONSUMPTION.

SIR,—The vast importance of providing a remedy *to prevent*, and if possible *to cure*, the distressing symptoms which almost always accompany diseases of the chest and lungs, and indicate that tubercles are forming, and ulceration likely to ensue, with its fatal result, has long occupied my serious attention, and after employing almost every article named in the *materia medica* supposed to possess the power I was seeking, but in vain, I eventually, some years ago, discovered and compounded the enclosed prescription, to which I respectfully call your attention, and I request that you will publish it in the *GAZETTE*, in order that the profession in general may have the opportunity of testing its virtues.

Having for many years enjoyed an extensive private practice in the city of New York and its vicinity, where pulmonary complaints prevail to a great extent, I had ample opportunity to test its powers as a remedial agent in those fatal diseases, and I must say, that my most sanguine anticipations were more than realised. Not only in cases where a constitutional predisposition existed to tuberculous consumption, but also in colds, coughs, asthma, spitting of blood, hooping cough, and those nervous and chronic affections which occur in debilitated and cachectic constitutions, I found it the most certain and reliable agent I ever employed.*

By referring to the *Cyclopædia of Practical Medicine*, vol. iv. pages 743, 744, 745, you will find the recipe for making my empyreumatic oil for expelling the tinea from the human body. Now I have equally as high an opinion of the medicinal and curative powers of this syrup in pulmonary diseases as I had of the oil for the expulsion of the worm, when I published the recipe for making it. I am convinced that it will act with equal certainty where ulceration has not already progressed too far. After I had fully satisfied my mind that it was a remedy of such inestimable value, I made known its composition to a number of eminent and skilful physicians, in order that they might also test its virtues and extend its benefits by relieving a vast amount of human suffering.

* Is not this something like attempting to prove too much? Homœopaths profess to be able to produce in a healthy person half a dozen diseases by the same remedy; but it is a new feature to us that one remedy should be equally curative in half a dozen different diseases. We insert the letter—*Valeat quantum*.—ED. GAZ.

It has been extensively employed by them, and with success, both in private and hospital practice, and in letters of compliment to me they say, "*it is the most valuable remedy for pulmonary complaints within their knowledge.*"

I have addressed this letter to you, for the purpose of impressing on your mind the importance and necessity of having the mode of preparing so valuable a remedy for pulmonary diseases made known to every medical practitioner throughout the world, and I have therefore selected the *GAZETTE* as one of the channels through which to effect this laudable object. That you will second me in my efforts to give it publicity I have no doubt, and by giving it a prominent place in the *GAZETTE*, be the means of restoring health to thousands who are now in despair.

I am, Sir,

Your obedient servant,

JULIAN XAVIERE CHABERT, M.D.

431, Grand Street, New York,
U. S. A., August 15th, 1851.

℞ Mucilaginis Cochleæ terrestris (exsiccat.), lbj. Powder the mucilage, and dissolve it in one quart of boiling water.

℞ Violæ odoratæ (flores), Papav. Rhœados (flores), Althææ officinalis (flores), aa. ʒiv. Infuse the flowers in two gallons of boiling water, and when cold strain.

℞ Lichen. Islandicus, Fucus Helminthochorton, aa. ʒiv.; Althææ officinalis (radix), lbj. Put these into one gallon of warm water, and macerate till the impurities can be easily removed; when clean, put them into a brass kettle with three gallons of water, and boil over a slow fire till all the mucilage of the plants has been extracted from them; then strain and mix the three mixtures together in a large brass kettle, stir well together, and boil over a slow fire: when boiling add ℞ Sacchari Albi (opt.), lbxxx.; boil slowly till a rich syrup is formed and it is boiled down to five gallons. Clarify it with white of eggs or Russian isinglass; when it has become perfectly cool put it into *pint bottles*, and to each *pint bottle* add ℞ Solutionis Acetatis Morphicæ (Magendie's Formula), ʒj.

Dose for an adult—half a wine-glass three times a-day, in milk or marshmallow tea. Give to children in proportion to their age.

* * * The writer should write his prescriptions in English, or hire a scribe to put them in proper Latin. There was not one word in his MS. spelt correctly. We publish the letter; but we think our readers will agree with us that the acetate of morphia is the active medicinal principle, and that the vegetables merely add to the mystery of the thing.

Medical Intelligence.

THE YELLOW FEVER IN PORTUGAL.

INTELLIGENCE from Oporto, of the date of the 30th ult., announces that the yellow fever had appeared at Oporto; and although the vessel which brought the intelligence had a clean bill of health, it was with difficulty pratique was obtained at Vigo. It is stated that a vast deal of sickness prevailed, supposed to be produced by the excessive heat and the inferior quality of the fruit.

THE NEW ABYSSINIAN REMEDY FOR RABIES.

WE appear destined to have a run of remedies from Abyssinia. The *Koussou* for tapeworm is only of recent introduction, and we have now the announcement of a remedy for rabies in dogs. The French journals announce that M. Roehet d'Héricourt, the distinguished traveller, has brought from Abyssinia the root of the *Cucumis Abyssinica*, said to be possessed of the valuable property of curing rabies in dogs. In presenting it to the Academy of Sciences, M. d'Héricourt stated that he had himself seen, in Abyssinia, several dogs in different stages of madness *completely cured* by having the powder of the root mixed with food. The communication was received with the liveliest interest, and experiments were ordered to be made. In the last sitting of the Academy a report was presented by the director of the Veterinary School at Alfort, stating that he had tried the remedy on four mad dogs, but without the slightest success. He added that, fearing the roots might have lost their virtue, he procured one of a living plant from the Jardin des Plantes, but that it too was inefficacious. Further experiments are, however, to be made, and more roots are to be got from Abyssinia. There seems no reason why what is a remedy for a dreadful malady in Africa should not be a remedy for the same malady in Europe also.

* * * We have one observation to make with regard to this announcement. The desideratum is not to cure rabies in dogs, but *hydrophobia in man*. The treatment at present pursued with respect to mad dogs is found most effectual. This is simply shooting them or otherwise destroying them. There are enough of the canine species in the world without going so far as Abyssinia for a specific to restore those dogs which, through disease, become a source of wide-spread danger and death to man as well as to animals of their own

species. M. d'Héricourt's remedy, even if effectual, would only be of interest to veterinarians, as it still remains to be proved that it possesses any influence in preventing or arresting hydrophobia in the human subject.

ST. LOUIS UNIVERSITY.

THE board of faculty embraces eight gentlemen distinguished for their scientific attainments and happy qualifications for teaching. The circular says, emphatically, that *anatomical material* is "both cheap and abundant"—a consideration that will doubtless influence those ardent students who prefer to make their own dissections. One hundred and seven names are on the last printed catalogue, showing there will be many candidates to supply those places in the far West, where the services of a physician are in demand.

MEDICAL COLLEGE OF SOUTH CAROLINA.

FROM a published Catalogue of the Trustees, Faculty, and Students of the Medical College of the State of South Carolina, for the session of 1850-51, it appears there were 230 students attending the medical lectures, 65 of whom, having passed the usual examination, received their diplomas as doctors in medicine. The facilities which this school possesses for furnishing a thorough practical medical education to students are said to be very great, and it is satisfactory to hear of its prosperous condition.

THE JACKSONIAN AND COLLEGE TRIENNIAL PRIZES FOR 1852.

THE Council of the Royal College of Surgeons have announced the following to be the subject of the Jacksonian Prize for the year 1852, viz.—"The Pathology and Treatment of Stricture of the Urethra:" the prize is twenty guineas. The College Triennial Prize of fifty guineas, to be awarded at the commencement of the ensuing year, is—"On the Functions of the several Parts of the Large Intestines in the Class Mammalia."

EXPENSES OF CORONERS' INQUESTS IN MIDDLESEX.

AT a meeting of the Middlesex Magistrates on the 4th inst., it was ordered that the following sums should be paid:—To Mr. Baker, for 92 inquisitions, held between the 28th of June and the 21st of August, £291. 5s. 1d. To Mr. Bedford, for 44 inquisitions, held between the 1st of June and the 31st of July, £127. 14s. 4d.: in three cases the fees of this coroner were disallowed, upon the ground that there had been no cause or necessity for the particular inquisitions to have been held. To Mr. Wakley, for 150 inquisitions, held between

the 23d of June and the 18th of August, £540. 0s. 8d. less the fees in two cases. In reference to the several inquests held by Mr. Wakley, the payment of which had been deferred at the last county meeting for the obtainment of further information as to the propriety or the necessity of such inquests being held, the committee now recommended that the fees upon nine of those inquisitions should be paid, but that the fees upon the remaining five should be disallowed. [Thus, in a period of about two months, 286 inquests were held in Middlesex! It would be interesting to know in how many of these cases *medical evidence* was dispensed with.]

REPORT ON THE COLNEY HATCH LUNATIC ASYLUM.

ON the 17th of July last the first of the patients was received into this asylum, and since that time they have been coming in on every Tuesday and Friday, the reception days. Arrangements were first made to receive from the private asylums the patients belonging to the parishes of the eastern division of the county (for the accommodation of which division the asylum was placed in the locality it occupies), as patients in private asylums necessarily caused greater expense to the parishes than those kept in the workhouses; and application was at the same time made to the Committee of Visitors of the Hanwell Asylum to send to the Colney Hatch Asylum such patients chargeable to parishes in the eastern division of the county confined there, as their medical officers might deem removable without injury to their state of malady or feeling; hoping thereby immediately to create the long-desired vacancies in that establishment which would admit of recent and hopeful cases from the western district being taken in. The county patients still remaining in licensed houses next engaged the attention of the committee as an expensive class, whose maintenance at Colney Hatch would fall lighter on the county than in private asylums; and the committee trusted that the numbers which it was supposed would be thus immediately secured would enable the committee to fix a moderate weekly rate to begin with..... They have now in the asylum 179 male and 331 female patients, and when the Hanwell Asylum shall have furnished the contingent which its medical officers have reported may be removed, they have reason to believe that the first rate of 9s. 11d. per week, which they have found it necessary to make (being considerably less than what the parishes now pay at licensed houses), will be sufficient for the present purposes of the asylum..... The committee find that there is no part of the acts of parliament for the

regulation and management of county pauper lunatic asylums which specifically provides the pecuniary means for meeting the expenditure which must necessarily be incurred for the maintenance and care of the patients on the first filling of the asylum, and before a rate can be collected for the purpose. Under these very peculiar and difficult circumstances the committee hope the court will not object to authorise the county treasurer to make from time to time such advances for the maintenance and care of the patients out of the moneys borrowed for the purposes of the asylum as may be necessary, until the rates for the patients can be collected from the different parishes; such advances to be repaid to the county treasurer out of the rates when collected."

The total cost of this asylum up to the present time is stated to be £272,767. 15s. 2d.

A UNIVERSAL LAW OF NATURE.

WE have received from Mr. W. Parker, of Birkenhead, a copy of correspondence in reference to a discovery of some new universal law of nature, made by himself. Mr. Parker appears to think that the press, medical and general, has entered into a sort of conspiracy to suppress his discovery. We have read the whole of the correspondence without being able to make out what it is that he has discovered.

We subjoin an extract from one of his letters, containing what he describes as his "three cogent reasons for the universal law:"—

"1st. The appreciation and uses of the predominant element, nitrogen; also, the cause and nature of heat, as yet undiscovered.

"2nd. The ignorance of successful medical treatment for cholera and lunacy, resulting from the first.

"3rd. The medical and general press omitting to circulate my suggestions, submitted to them for public inquiry, on these subjects. The medical associations, boards of health, colleges, hospitals, literary and scientific institutions, lunatic asylums, &c., professors of chemistry on agriculture, in this kingdom, having likewise declined to assist in their elucidation.

"Where shall we look for reasons of those prominent societies being so palpably opposed to an open investigation of subjects so fairly debateable and important?"

The law appears to include the uses of nitrogen, the cause and nature of heat, and the successful medical treatment of cholera and insanity! It is quite beyond our comprehension, and we doubt whether any one besides Mr. Parker will admit that his propositions are either cogent or even intelligible.

A NEW AND CHEAP MODE OF VENTILATION.

UNDER this title we have received a long letter from Mr. Charles Watson, of Rhodes Street, Halifax, in which he states that his plan consists in "withdrawing the vitiated and supplying any quantity of pure air without perceptible sensation to persons in the room, and they are not exposed to currents of air. Every crevice in the room that admits air may be closed without affecting the operation of the ventilator.

"The apparatus is made of zinc and iron, is simple, self-acting and durable, and regulates the supply of air according to the season of the year and the number of persons in a room. It has been also successfully applied to other schools and to public buildings, private dwellings, stables, large weaving sheds, an infirmary, an editor's study, and a chapel that seats above one thousand persons."

The letter contains no other details respecting the ventilator—its cost or mode of action;—but Mr. Watson, who has not patented the invention, offers to give practical information on the subject to all who apply to him. If he will forward to us a description of his process of ventilation we shall be happy to give it a place in our columns.

OBITUARY.

SUDDENLY, on the 2d inst., at his residence, No. 4, Bentinck-terrace, Regent's-park, William Milligan, Esq., M.D., late surgeon of the 6th (Enniskillen) Dragoons, and formerly of the 75th Regiment.

At Edgbaston-hall, on Thursday, the 4th inst., in the 94th year of his age, Edward Johnstone, M.D.

On the 6th inst., at Hoxton New-town, George F. Ree, Esq., surgeon, in the 24th year of his age.

On Sunday, the 7th inst., John Mackinlay, Esq., of Merrow, near Guildford, surgeon, aged 40.

BOOKS & PERIODICALS RECEIVED

DURING THE WEEK.

(The List will be given in the following No.)

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 30.028
 " " " Thermometer^a 60.5
 Self-registering do.^b Max. 71.2 Min. 52.6

^a From 12 observations daily. ^b Sun.

RAIN, in inches, .14. — Sum of the daily observations taken at 9 o'clock.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Sept. 6.

| BIRTHS. | | DEATHS. | |
|-----------|------|-----------|-----|
| Males.... | 777 | Males.... | 478 |
| Females.. | 723 | Females.. | 489 |
| | 1500 | | 967 |

CAUSES OF DEATH.

| | |
|--|-----|
| ALL CAUSES | 967 |
| SPECIFIED CAUSES | 964 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 362 |
| <i>Sporadic Diseases, viz.—</i> | |
| 1. Dropsy, Cancer, &c. | 29 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 100 |
| 4. Heart and Bloodvessels..... | 23 |
| 5. Lungs and organs of Respiration | 71 |
| 6. Stomach, Liver, &c. | 60 |
| 7. Diseases of the Kidneys, &c. | 7 |
| 8. Childbirth, Diseases of Uterus, &c. | 8 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 3 |
| 10. Skin..... | 0 |
| 11. Premature Birth | 0 |
| 12. Old Age | 19 |
| 13. Sudden Deaths..... | 6 |
| 14. Violence, Privation, Cold, &c.... | 23 |

The following is a selection of the numbers of Deaths from the most important special causes :

| | | | |
|--------------------|-----|------------------|-----|
| Small-pox..... | 16 | Convulsions..... | 35 |
| Measles..... | 14 | Bronchitis | 27 |
| Scarlatina | 29 | Pneumonia | 28 |
| Hooping-cough | 15 | Phthisis | 121 |
| Diarrhœa..... | 192 | Lungs | 8 |
| Cholera..... | 17 | Teething | 7 |
| Typhus..... | 41 | Stomach | 4 |
| Dropsy | 10 | Liver..... | 8 |
| Hydrocephalus | 33 | Childbirth | 4 |
| Apoplexy | 24 | Uterus | 4 |
| Paralysis | 12 | | |

REMARKS.—The present weekly return presents a very satisfactory state of the health of the metropolis. Of the 967 deaths, 518 were of children under 15 years, 144 of the age of 60 and upwards, and 303 under the age of 60. The number of deaths from cholera fell to 17, and these were of the usual form that prevails over Europe in the hot season. The contrast between the past week and the corresponding period of last year—the most fatal week of the cholera epidemic—is very striking, when the crowded state of the metropolis is borne in mind.

NOTICES TO CORRESPONDENTS.

We have to acknowledge the receipt of communications from Dr. De Lisle, of Guernsey.—Mr. Sedgwick—Dr. F. J. Brown.

RECEIVED.—Dr. Ramsbotham.

CORRIGENDUM.—In Dr. Chevers's Case, in our last number, page 403, col. 1, line 27, for "1851," read "1841."

ADVERTISEMENTS intended for insertion in the GAZETTE should be addressed to the publishers, Messrs. LONGMAN AND CO., 39, Paternoster Row, London.

ADVERTISEMENTS.

THE MANCHESTER ROYAL SCHOOL of MEDICINE and SURGERY,
Pine Street, behind the Royal Infirmary.—
Founded 1824.

WINTER SESSION, 1851-52.

The Winter Session of this School will open on Wednesday, the 1st of October, at Twelve o'clock, when an Introductory Address will be delivered by Dr. Renaud.

Lectures will be delivered as follows :—

General and Surgical Anatomy and Physiology, by Mr. Turner.
Descriptive and Microscopic Anatomy, by Mr. Wm. Smith.
Practical Anatomy and Demonstrations, by Mr. Lund.
Medicine, by Dr. H. Browné.
Surgery, by Mr. Jordan.
Chemistry, by Mr. F. Crace Calvert.
Clinical Medicine and Surgery, at the Royal Infirmary, by the Physicians and Surgeons to the Hospital.

SUMMER SESSION, 1852.

Midwifery, by Mr. Heath.
Materia Medica, by Dr. Ainsworth.
Forensic Medicine.
Botany, by Mr. Just and Dr. Hardy.
Anatomy, Physiology, and Pathology of the Eye, by Mr. Hunt.
Practical Chemistry, by Mr. Crace Calvert.
General Pathology and Morbid Anatomy, by Dr. Renaud.

The Winter Session commences on the 1st of October, and terminates at the end of March. The Summer Session begins on the 1st of May, and terminates at the end of July.

At the conclusion of the Session, Medals and Certificates of Honour will be awarded to the most distinguished Students.

As only one Candidate came forward for the Scholarship last Session, and as the Rules of the School require competition, the Scholarship is again open to gentlemen who may desire to compete for it, at the close of the forthcoming Summer Session.

MEDICAL SCHOOL, ANDERSON'S UNIVERSITY, GLASGOW.

The WINTER SESSION will begin on Tuesday, November 4, 1851. Lectures will be delivered daily for six months, on the following branches of Medical Science :—

Anatomy, Descriptive and Physiological—Dr. M. S. Buchanan.
Anatomy, Demonstrative and Surgical—Dr. M. S. Buchanan. (Demonstrator—Dr. George Buchanan.)
Principles and Practice of Surgery—Dr. Hunter.
Principles and Practice of Medicine—Dr. A. Anderson.
Institutes of Medicine—Dr. E. Watson.
Materia Medica, Pharmacy, and Dietetics—Dr. Easton.
Chemistry—Dr. Penny.
Practical Chemistry—Dr. Penny.
Midwifery and Diseases of Women and Children—Dr. Paterson.
Medical Jurisprudence and Police—Dr. Crawford.
Natural Philosophy (thrice a-week)—Dr. Taylor.
Mathematics—Mr. Laing.
Summer Courses of Anatomy, Midwifery, Chemistry, and Botany, begin in May.
Botany—Mr. Bell.

Fee for each Class, £2. 2s. Perpetual, £3. 3s.

Certificates of attendance on the above Courses are received by the Universities of Oxford, Cambridge, London, Aberdeen, and St. Andrew's ; by

all the Royal Colleges of Surgeons in Great Britain and Ireland, by the Faculty of Physicians and Surgeons in Glasgow ; and by the Army, Navy, and East India Boards, and the Apothecaries' Company.

Students attending the Medical Classes have the opportunity of witnessing the practice of the following Hospitals, viz. :—Lying-in Hospital, 10s. 6d. for six months ; Eye Infirmary, £2. 2s. for six months ; Royal Infirmary, £7. 7s. for two years, including Medical and Surgical Clinical Lectures, which are delivered four times weekly. The patients admitted to the Eye Infirmary average 900 annually ; those admitted to the Royal Infirmary, nearly 3000 ; besides 6000 out-patients treated at the Dispensary. Average number of Surgical Operations, 120 annually.

The Saloon for dissection, which is free to those attending either of the above Courses of Anatomy, is open from nine A.M. to four P.M. ; and attached to it there have been opened a Reading-room and Museum, for the use of the Anatomical Students.

The new and extensive Laboratory of the Institution, fitted up expressly for gentlemen desirous of pursuing Practical and Analytical Chemistry, is open daily from eleven till four o'clock. No charge for apparatus and materials in the Class for Practical Medical Chemistry.

The University Museum, a splendid collection of specimens of Natural History, including more particularly those of Zoology, Geology, Mineralogy, and Antiquities, is open to all Students attending the University.—A valuable Medical Library is also attached to the Medical School.

KING'S COLLEGE, LONDON.—

MEDICAL DEPARTMENT.—The WINTER SESSION, 1851-2, will commence on Wednesday, October 1, 1851, on which day all Students are expected to attend the Introductory Lecture, by Professor William Bowman, F.R.S., at Two o'clock.

The following Courses of Lectures will be given during the Session :—

Anatomy, Descriptive and Surgical—Professor Richard Partridge, F.R.S. ; Demonstrators, Henry Lee, F.R.C.S., Henry Hyde Salter, M.B., and John Wood.
Physiology and General Morbid Anatomy—Professors R. B. Todd, M.D., F.R.S., and W. Bowman, F.R.S.
Chemistry, Theoretical and Practical—Professors W. A. Miller, M.D., F.R.S., and John Bowman, Esq. ; Demonstrator, T. F. Hardwich.
Principles and Practice of Medicine—Professor George Budd, M.D., F.R.S.
Principles and Practice of Surgery—Professor William Fergusson, F.R.S.

KING'S COLLEGE HOSPITAL.

The Hospital is visited daily.

Clinical Lectures are given every week, both by the Physicians and by the Surgeons.

The Physicians' Assistants and Clinical Clerks, the House Surgeons and Dressers, are selected by examination from the Students of the Hospital.

One Scholarship of £40, tenable for three years ; one of £30, and three of £20 each, tenable for two years, will be filled up in April next.

Full particulars on every subject may be obtained from Professor Guy, M.D., Dean of the Department ; or upon application to J. W. Cunningham, Esq., Secretary.

R. W. JELF, D.D., Principal.

August 1, 1851.

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A COLLECTION OF FACTS ILLUSTRATIVE OF
THE

MORBID CONDITIONS OF THE
PULMONARY ARTERY,

AS BEARING UPON THE TREATMENT OF
CARDIAC AND PULMONARY DISEASES.

BY NORMAN CHEVERS, M.D.,

Civil Assistant Surgeon, Chittagong, Bengal.

[Continued from page 403.]

Diagnosis and Symptoms.

WHEN I find an accomplished physician and careful auscultator of the present day omitting from his treatise all consideration of the signs which characterise the diseases of the pulmonary artery, as being of little practical value, owing to the extreme rarity of those lesions;* and when, on looking over the materials which have been brought together in this memoir, I find that, in consequence, probably, of a similar opinion in the profession generally, scarcely more than two or three practical observers have considered the diagnosis of this class of diseases worthy of their attention,—I cannot but feel some degree of apprehension in bringing forward the following imperfect details in illustration of a subject regarding which so little positive information has hitherto been acquired. It is certain, however, that the diseases which affect the pulmonary artery are neither rare nor unimportant, and that, when present, they are generally characterized by certain distinctive rational symptoms and physical signs. The present chapter will merely embody a few scattered facts which I have been able to collect in elucidation of the subject. I trust that their evident imperfection will lead to more careful observation, and to the establishment of more definite results.

It would, of course, be almost impossible, and quite useless, to attempt to lay down any precise rules for diagnosticing every one of the various malformations to which the cardiac apparatus is liable; but a few general rules, founded principally upon the relative frequency of the principal forms of congenital lesion, and upon a knowledge of the periods to which life may be extended in each, may lead to the establishment of a series of diagnostic principles, which, although not by any means absolutely certain in their application, will frequently assist us in arriving at correct opinions.

* Practical Observations on Certain Diseases of the Chest, and on the Principles of Auscultation, by Peyton Blakiston, M.D., F.R.S., p. 223 1848.

It will probably never lie within the power of any physician to diagnosticate the particular set of lesions which are present in the vascular system of a cyanosed infant* within a few days of its birth. Its heart may be the seat of any conceivable kind of malformation: still, if the child has become cyanosed almost immediately upon the establishment of respiration, it is most probable that it suffers from closure of the pulmonary orifice, with imperfection of the ventricular septum.

Where the symptoms of morbus cæruleus are not developed until some days or weeks subsequently to birth, it is probable that the orifice of the pulmonary artery is narrow, the ventricular septum open, and the foramen ovale and arterial duct either closed or distinctly contracted; or the latter of these passages may have become narrowed or closed, while the former is widely pervious.

If the infant be upwards of a year old, it is in the least degree improbable that it suffers from the malformation usually known as “distribution of the descending aorta from the pulmonary artery.”

If the child has survived its fourth year, transposition of the great arteries is scarcely to be suspected.†

When cyanosis is present at about the age of three or four years, it is probably due, either to great contraction, or closure of the pulmonary orifice, with ventricular communication. Should a single systolic bruit be heard superficially in the region of the pulmonary orifice, the case will almost certainly prove to be one of the former kind.

At the age of one month, or at any subsequent period, it cannot be judged with any probability that the heart literally consists of only two cavities.

In early infancy there are no means of diagnosticing between imperforation of the pulmonary artery and transposition of the two main arteries, except that the former irregularity is of far more frequent occurrence than the latter.

If the patient be above the age of seventeen years, imperforation of the pulmonary orifice can scarcely be suspected.‡

A person above the age of sixteen years, or a young adult, suffering from cyanosis of long standing, a bruit being audible in

* In these remarks, I have not used the term “cyanosis” as merely characterising the symptom of lividity of the surface, but as comprising that train of phenomena which mark the existence of congenital malformations of the heart.

† In the three recorded cases of this malformation in which the longest survival occurred, the children died respectively at the ages of ten months, two years and nine months, and three years.

‡ Two individuals have presented this malformation at the age of ten years; one at twelve; and one at sixteen.

the region of the pulmonary artery, most probably has contraction of the orifice of that vessel, with perforation of the septum ventriculare.

If the individual has passed the period of early youth before becoming the subject of cyanosis; or if that symptom, formerly scarcely perceptible, has become considerably more apparent of late, it is, at first sight, probable that the disease is congenital narrowing of the pulmonary artery, the impediment having latterly been increased by thickening and further contraction of the parts, consequent upon super-added disease. In this case the ventricles probably do not communicate.

If the patient has passed the age of thirty years, the existence of congenital deficiency of the ventricular septum is highly improbable. Those who suffer from a congenital cause of obstruction which has originally been sufficient to arrest the development of the septum, very rarely, if ever, attain so advanced an age.*

If, in any given case of cyanosis, the symptoms be ascribed solely to a patent condition of the foramen ovale, the incorrectness of that diagnosis will certainly admit of proof upon examination of the body.†

The larger number of the above diagnostic rules will, doubtless, occasionally fail; but I believe that they afford as near an approximation to the truth as we are at present capable of obtaining when attempting to generalise upon a disease so multifarious in its types, and, at the same time, subject to so few variations in its rational symptoms, as congenital malformation of the heart.

Having given very full details of the more prominent symptoms in most of the cases which I have cited, it appears quite unnecessary to enter into a separate description of the various characteristics of

* In the four cases of this defect (the lesion being unquestionably congenital) where life was most prolonged, three of the individuals died respectively at the ages of twenty-two, twenty-four, and twenty-five years; and in an example observed by Dr. Fletcher, and already cited, an opening as large as a goose-quill was found in the ventricular septum of a man sixty-three years of age. In one rather questionable case the person is stated to have died at the age of twenty-seven. Richerand relates a case of imperfect septum ventriculare in which the patient attained the age of forty years; and Louis cites the instance of a general officer in whose heart a similar malformation was discovered. However, as Dr. Todd very pertinently remarks, there does not appear to have been any contraction of the pulmonary orifice in either of these two cases. I greatly doubt that an individual in whom a large and free congenital communication exists between the ventricles can reach the period of middle life.

† In the analysis of 180 cases of cyanosis, M. Aberle, of Vienna, found that two-thirds of the individuals were males.

morbus cæruleus. It is almost impossible that any practitioner should fail to distinguish a case of this description. The diagnosis between ordinary cardiac disease and congenital malformation is, however, a matter of some importance, and will be discussed hereafter.

The amount of positive information which has been adduced relative to the auscultatory signs of the various malformations of the heart, is exceedingly small.

Considerable attention has of late years been paid to the physical signs which characterise obstructive disease of the pulmonary orifice. Dr. Ormerod, who has published a highly interesting and suggestive paper on the subject,* evidently regards as the most distinctive sign the presence of a murmur heard loud at the base of the heart, and which may or may not be also traceable along the aorta, but most clearly audible in a line from the third left intercostal space at the edge of the sternum, towards the middle of the left clavicle, for the distance of from two to two and a half inches. This is unquestionably the situation at which there is reason to expect that a bruit arising from obstructive disease of the pulmonary orifice should be most intense; but where, as is usually the case in these instances, the position of the heart is more or less abnormal, owing to the enlarged condition of the right ventricle, and where the cardiac action is much excited, the bruit is so liable to have its point of greatest intensity altered, and to be diffused over a very large portion of the thoracic cavity, that I apprehend it will, in a considerable proportion of cases, be found extremely difficult to assign to it by any means so definite an anatomical boundary.†

* "On a Systolic Murmur in the Pulmonary Artery, and its Application to the Diagnosis of Functional and Organic Murmurs," *Edinburgh Med. and Surg. Journal*, 1846, p. 95.

† In a discussion which arose subsequently to the reading of Dr. Ormerod's paper at the Medico-Chirurgical Society, Dr. C. J. B. Williams objected that the rule laid down by Dr. Ormerod did not sufficiently distinguish aortic from pulmonary arterial murmurs. "When an aortic murmur was weak, it might be heard at the midsternum, yet not be loud enough to reach the arteries of the neck; but when made louder by anything exciting the actions of the heart, then it was heard in the neck, and showed its aortic origin. This is commonly the case in anæmia, in which the loose, ill-filled state of the arteries, makes them bad conductors of sound; and this, he suspected, would apply to most of the cases" (of "functional disease") "described by Dr. Ormerod as those of pulmonary murmurs." (*LONDON MEDICAL GAZETTE*, June 6th, 1845). Dr. Ormerod's observation has led him to conclude that a murmur may be heard in the pulmonary artery in acute rheumatism, as also in many cases of anæmia and its kindred maladies, which murmur he believes there are good reasons for concluding not to arise from organic disease, as well on account of the variable nature of the murmur itself, as, most conclusively, on

In chronic cases, and where the bruit is single, the *superficial character* of an abnormal sound heard over the base of the right ventricle, and in the course of the pulmonary artery, becomes very distinctive of its origin in that vessel.* The *tone* of the bruit, of course, varies greatly in intensity, according to the nature of the lesion which produces it. An abnormal sound originating in this artery is usually systolic, being occasionally so much prolonged as entirely to mask the second sound.†

account of the rarity of disease of the pulmonary valves.

* In cases of phthisis, Dr. P. M. Latham has frequently met with a systolic murmur occupying the space between a line drawn from the left side of the sternum along the upper edge of the second costal cartilage, and continued an inch along the second rib, and another line drawn from the sternum along the lower edge of the third costal cartilage, and continued an inch along the third rib. This sound is a gentle bellows murmur, which cannot be perceived either in the præcordial region, or in the course of the aorta, or in the carotids. Dr. Latham considers that, where, from direct examination of the lungs, a suspicion only of tubercular disease can be entertained, the murmur in the space indicated must always contribute to confirm it. He supposes the pulmonary artery, in its first divisions, to be the seat of the murmur, but doubts whether it becomes such in consequence of its own disease, or by reason of pressure or impediment reaching it from diseased lung. I am not aware that the above observation has been explained by dissection; nor am I acquainted with the existence of any perceptible organic condition in the heart or pulmonary artery in cases of phthisis which could account for the occurrence of this murmur. Whether it depends upon pulmonary or pleural lesions, a want of relation between the size of the ventricle and the capacity of the artery, or upon other causes, has yet to be explained. Loose adhesion of the lung to the pericardium, emphysema of the pulmonary edges, which is common in phthisis, and especially where portions of the edges are occupied by tubercular deposit; recent pleuritic granular exudation, and the presence of an abscess in the anterior margin of either lung, but particularly of the left, may, in phthisis, produce abnormal sounds synchronous with the movements of the heart, almost undistinguishable from those connected with organic disease of that organ: but all these sounds are, as far as I have observed, more or less modified by respiration. I have never discovered any morbid condition of the pulmonary artery, either in these or in any other cases of phthisis, which appeared capable of producing a bruit.

† This was noticed in a patient of Dr. Peacock's, whose case I have already cited in the chapter on Acute Inflammation of the Pulmonary Artery, reserving the physical signs for insertion in this place; as, although the cardiac lesions were somewhat complicated, the auscultatory phenomena appeared to have agreed pretty closely with the rules laid down by Dr. Ormerod. "The chest yielded a clear sound on percussion, except in the præcordial region, where the resonance was impaired over a larger space than natural. The liver could be felt extending a little below the edges of the ribs; the sternum was arched and prominent, more especially towards its base. A loud murmur was heard in the præcordia, accompanying the impulse of the heart. It was of a soft, blowing character, and was most intense at the cartilage of the third left

A diastolic bruit has rarely been observed as marking regurgitant disease of the pulmonary orifice. In one of Dr. Ormerod's cases which I have cited, a loud, harsh systolic murmur became diastolic previously to the patient's death—probably in consequence of a gradual failure in the power of the right ventricle. In Dr. J. Bell's case, already detailed, the sounds of regurgitation were quite distinct, and apparently attended with an abnormal first sound. Here, however, there was reason to believe that the blood passed downward *from* the narrow and valveless pulmonary artery to the right of the ventricle. In the case of aneurism of the pulmonary artery, with contraction of one of its valves, related by Drs. Fletcher and Blakiston, the sound appears to have been double. "Immediately on the left of the sternum, between the second and third ribs, there was dullness on percussion over a space measuring nearly four square inches. Over this spot a very liquid pulsation was felt, accompanied by a purring thrill, so rough and so close to the surface, that it seemed almost to grate on the fingers. At the same place a hollow rasp sound was heard with the systole of the heart, and also, for a moment, at the commencement of the diastole, as if the blood was receding."*

rib near the sternum, or at a point half an inch above the nipple, and between that body and the sternum. It was here prolonged throughout the whole period, so as to render the second sound inaudible. From this point it continued to be heard very distinctly, though decreasing in intensity, along the upper part of the sternum, in the subclavian and carotid arteries" (this circumstance may have been due to the existence of a very free communication at the base of the ventricles), "and on the left of the spine, in the interscapular and dorsal regions. It was also heard, less distinctly, in a line from between the nipple and sternum, towards the middle of the left clavicle. Below the level of the nipple the murmur became shorter and more feeble; and, at the point of pulsation of the apex, towards the epigastrium, and on the right side of the lower half of the sternum, it was followed by a very clear second sound."

* The signs observed in the above case agree well with those given by M. Aran (partly, apparently, on Hope's authority, and partly theoretically) as the characteristics of *Aneurism of the Pulmonary Artery*.

"General symptoms.—Those of hypertrophy, with dilatation of the heart, which generally accompanies this morbid state. Dilatation of the pulmonary artery can only be confused with dilatation, or with sacciform aneurism of the aorta; but never in either of these" (two latter) "cases do we find pulsation between the second and third ribs. Even if an aneurismal tumor of the arch of the aorta should have destroyed the cartilages of the second and third ribs, it would not be possible to make a mistake in diagnosis, because the aneurisms of the aorta are very large, and the murmur which they produce is grave and distant, instead of being acute and superficial; and, besides, the tremor would be perceived above the clavicles, which is never the case in dilatation of the pulmonary artery."—*Practical Manual of the Diseases of the Heart*, translated by Harris.

Attempts are frequently made to diagnose the presence of those deficiencies in the ventricular and auricular septa which so frequently attend congenital narrowing of the pulmonary orifice. Where, however, as usually happens, these communications are wide, and not associated with a diseased and roughened condition of the adjacent endocardial surfaces, I am not acquainted with any evidence in favour of the belief that their presence occasions the development of abnormal sounds: indeed, it should hardly be expected that, where, owing to the presence of some permanent cause of obstruction, the course of the circulation has been diverted through one of these apertures, any abnormal sound should attend the transit of the fluid, so long as the communications continue to be direct, smooth, and perfectly free. In some cases where deficiency in the ventricular septum exists, independently of any narrowing of the arterial orifices, the abnormal aperture is liable to become greatly contracted, and the surrounding endocardium is then usually found to present more or less irregularity of surface, wrinkling of the membrane, warty vegetations, or raised fibrinous deposits. Here it becomes doubtful whether the systolic bruit which is generally heard at the base of the heart is due to the forcing of a slender stream through the narrow communication, or to the passage of the currents, on their way to the arteries, over its irregular margins.

The rational symptoms which distinguish impediment to the entrance of this vessel are usually more characteristic than the descriptions of Tiedemann,* and of other authorities, would lead us to believe.

It has been shown that, although, in congenital cases, blueness of the surface usually attends obstructive disease of the pulmonary artery, this is not present unless the impediment is very considerable; and the case observed by Dr. Lloyd, although it can only weigh as a rare and exceptional instance, proves that the utmost amount of impediment may be established in the pulmonary artery of an adult without producing livor of the surface, providing the lungs act freely, and the volume of the circulating fluid is small.

An habitually small and rapid, but *regular*, condition of the pulse, usually associated with a more or less excessive action of the heart, is so generally present in cases of congenital cardiac defect, that it cannot be regarded as pathognomonic of contraction of the pulmonary orifice; still, it becomes

an important aid to diagnosis in cases where narrowing of this vessel occurs in the adult.*

Diminution in the volume of the pulse, attending aggravation of dyspnoea and palpitation, is, of course, always to be regarded in this, as in every other form of heart disease, as an unfavourable sign, as evidencing superadded pulmonary or cardiac obstruction.

A very characteristic and highly interesting leading pathognomonic sign of obstruction to the pulmonary artery appears to have almost altogether escaped the attention of writers on heart-disease. I allude to the distinctive circumstance that, in a very large proportion of cases, individuals suffering from great narrowing of the pulmonary artery seek the recumbent or horizontal position, either habitually or during paroxysms; while those who are the subjects of any other form of pulmonary obstruction, or of impediment to the circulation through the left heart, breathe most freely when the shoulders are raised, and the body is placed almost vertically. This circumstance has been noticed incidentally by the observers of several of the foregoing cases, but it never appears to have received its true weight, or its pathological explanation.† It is evident that, whatever distress of breathing occurs in uncomplicated cases of this description

* Dr. Williams observed that the pulse is not affected in cases of obstruction to the pulmonary orifice (as quoted by Copland, Dict. of Pract. Medicine, art. Heart, § 78). It is true that the pulse seldom intermits or is irregular in these cases, except occasionally, where there is regurgitation, or where the power of the heart begins to fail; but the smallness and rapidity of the pulse are too characteristic, in these cases, to allow it to be believed that the above opinion is still entertained by that eminent observer.

† This is abundantly shown in the instances which I have cited. Thus, in Dr. Lexis's case, the girl experienced paroxysms of strong suffocation, which she endeavoured to relieve by bending the body forward.

Dr. Pulteney's patient "could escape the fit by instantly lying down on the carpet on his left side, and remaining immovably fixed in that posture for about ten minutes."

In Dr. Ramsbotham's case, where the pulmonary artery and aorta arose from the right ventricle, with patency of the ventricular septum, the child "lay on her back, or on the left side, with her legs drawn up to the body, and the back bent to a semicircle."

In a patient of Dr. Peacock's "the respiration was peculiarly rapid and panting, and he was compelled to lie on the back, partly inclined to the right side, and with his head low."

In Dr. Birkett's case it is noticed that latterly "the respiration, though distressed throughout, appeared to become so far relieved as to admit of her lying in the horizontal posture."

In the case by Dr. Bond, of Cambridge (cited by Dr. Ormerod) the man "was able to retain the horizontal position to the last."

Dr. Lloyd's patient "lay on her left side;" and, "when she got out of bed, she was obliged

* For Prof. Tiedemann's account of the symptoms of narrowing of the pulmonary orifice see Edinburgh Med. and Surg. Journal for April 1846, p. 442.

results from impeded and insufficient access of blood to the lungs; and that hence the recumbent position affords the aid of gravitation to the contractile efforts of the heart, and, at the same time, renders the supply of arterial blood to the brain more free than it could otherwise be. This symptom cannot, however, be assigned merely to cases of congenital narrowing of the pulmonary artery: it is characteristic of all circumstances which impede the free access of blood to the pulmonary vessels. Thus it occurs in certain instances of tumors in the anterior mediastinum, and where extensive pericardial deposits and effusions compress the anterior surface of the heart. I have also observed it in two cases of aneurism of the root of the aorta, pressing forward to the sternum, and interfering with the pulmonary artery.*

It is a matter of great importance to be prepared to distinguish between those cases, so well described by Dr. Barlow, in which narrowness of the chest gives rise to cardiac obstruction, and those in which congenital disease of the heart has occasioned

to lie on the floor to avoid fainting. She had done this for some time during her illness."

In Dr. Elliotson's case there was dyspnoea, with palpitation, but the man "could lie down."

Mr. Adam noticed that, in a case of dilated pulmonary artery, obstructed by an "organised polypus," the patient was latterly obliged to have recourse to the recumbent position for relief "when the fluttering action of the heart became oppressive."

I believe that the only cases on record, of narrowing of the pulmonary artery, in which it is mentioned that the patients were compelled to remain in the erect position, are the two by Dr. J. Crampton and Mr. Marshall. In the latter the exception is accounted for by the fact that latterly the patient suffered from large ascitic effusion. I have not been able to meet with the original report of the former case, and can only find that, in addition to the cardiac defects, the whole surface of the body was extensively anasarcaous, and that the measurement of the right side of the thorax exceeded that of the left by half an inch. It is probable that here also some grave cause of pulmonary embarrassment exterior to the heart was in operation.

* In some cases of aneurism of the root and arch of the aorta there is considerable obstruction to the circulation (independently of the interference of the tumor with surrounding parts); the patient being consequently liable to suffocative attacks. In others the transit of blood is free, and the breathing little embarrassed, almost up to the time of the patient's death. In these two cases the aneurisms were evidently of the latter kind; while the second of Dr. Elliotson's cases (quoted in the chapter on Obstruction to the Pulmonary Artery consequent upon External Compression) was of the former description. There the pulmonary artery was extremely narrowed by a fibro-cartilaginous deposit, while there was a large aneurism of the aorta. In this instance the obstruction to the systemic circulation counterbalanced the defective pulmonary supply; and, consequently, the individual could not lie down.

ill-development of the other thoracic organs. Thus, nothing could be less rational than to recommend athletic sports for a narrow-chested child, the subject of congenital heart-disease; while almost equally ill results would accrue from denying proper exercise in the case of a person under fourteen or fifteen years of age, whose only discoverable physical fault was an ill-formed chest, attended with shortness of breath, and a liability to occasional palpitations.

Little difficulty attends this diagnosis during childhood; but, where the cases present themselves for the first time towards the age of puberty, rather more discrimination will be required. Here the following facts may be taken into consideration:—In cases of congenital disease of the heart in which the symptoms first become severe at puberty, the chest is not usually extremely ill-formed: the orifice of the pulmonary artery is mainly in fault, and a systolic bruit in this situation is usually present: whereas, in those cases of Dr. Barlow's where a bruit occurs (which by no means always happens), the abnormal sound may usually be traced to the mitral valve. At this period of life, however, the diagnosis is rather a matter of interest than of utility, as the principal mischief in either case is irreparable, and a knowledge of the precise nature of the cause of obstruction cannot materially influence treatment. The remark has been introduced here merely with a wish to enforce very strongly the necessity of distinguishing between the two sets of cases during childhood.

Permanence of the arterial duct is so generally associated with some other grave organic and obstructive lesion, either in the aorta or in the pulmonary artery, that it appears doubtful whether any perfectly distinctive signs of its existence can be obtained. Dr. Williams, however, states, as some ground of diagnosis in cases of this defect where there is no other very serious lesion to obscure it, that the murmur accompanying the first sound of the heart is *prolonged into* the second, so that there is no cessation of this murmur before the second has already commenced. From this sign—taken, of course, in connection with other symptoms—he has been able, in at least two cases, to diagnosticate this lesion; and post-mortem examination proved the accuracy of this diagnosis.*

[To be continued.]

* LONDON MEDICAL GAZETTE, May 7th, 1847 p. 824.

ON THE
INFLUENCE OF VARIATION OF
ELECTRIC TENSION,

AS A CAUSE OF DISEASE.

BY W. CRAIG, ESQ.

Surgeon, Ayr.

No field in the whole range of medical philosophy has been so much occupied with theories and speculations, as that which relates to the remote cause of *endemic and epidemic diseases*. Animalcula in the air, emanations from the earth of every character, and numerous other gratuitous speculations—even the hypothesis that volcanoes have a mischievous instrumentality—have their advocates and supporters. The very circumstance of the great number and contrariety of the theories which have been promulgated on this subject, and the unanimity which has existed in the adoption of the term “miasm,” which more directly signifies the action of an agent than the agent itself, indicates that the dreadful instrumentality which occasionally mows down our species with irresistible force is still unknown, and leaves room for further research, and apologises for new theories still.

Electricity has been placed amongst the malevolent agents which are supposed to cause these diseases. It is only lately, however, that anything like a rational theory of the action of this agent has been entertained and advocated. In connecting electricity with the cause of epidemic disease, authors have almost uniformly referred in a vague and indefinite manner to the electricity of the air, and to that on the earth's surface, without reference to its internal elimination.

I have long entertained the opinion, that variations in the electric tension on the various parts of the earth act prejudicially on those animals that may be placed on the portions of the earth which may be thus affected.

In the following part of this paper I will state what I consider to be rational views respecting the operation of this agent on the animal economy. To be properly understood, it will be necessary to carry along with us a few recollections of natural philosophy. It is a recognised fact in physics, that heat and electricity are identical, and the one

is convertible into the other. It is also admitted as fact, that every atom of ponderable matter is surrounded by a little atmosphere of heat, and it is through the agency of this element that attraction and cohesion between the primary constituents of bodies are maintained. The gaseous bodies are known to be possessed of an immense amount of latent heat. It is on the large amount of latent heat in these light bodies that their characteristic lightness depends. The vegetable bodies in their composition are almost wholly composed of these gaseous bodies, and, of course, embody less or more of the heat which is individually possessed by their constituents. The saline and earthy constituents of these vegetable bodies also contain their portion of latent electricity.

These gaseous bodies—both in their aeriform state, as in the atmosphere, and in their solid state when in vegetable combination—are required to administer warmth to the animal structure. The decomposing process in the animal structure is analogous to that which takes place in a galvanic arrangement. In the galvanic process the electricity is evolved from the bodies under chemical operation just as the separation of the bodies is being effected, to form a new combination. The primary principles of this new body require less electricity than when in their original combination, and hence the evolution of electricity; so, also, in those vital operations which are ever active during healthy existence, is there a continual giving off of vast volumes of electricity, from the changes of the elementary principles that are continually going on. Thus, during respiration, the oxygen, when separating from the nitrogen of the air and uniting with the carbon of the blood, forming carbonic acid gas, parts with some of its latent electricity, as it retains less and requires less in forming this new combination with the carbon. In digestion, too, there is another source of animal electricity; whilst the food is being changed into the constituents of the body, the primary elements of the bodies which constitute the food part with some of their latent electricity when entering into those new formations with the animal tissues: the changed position of these elementary bodies causes them to require less electricity than in their

original combination, and in like manner is there the liberation of electricity. There may be another source of electric fluid from the changes of the elementary principles of the blood during secretion.

I am persuaded that there is more truth in the electric theory of life than is generally admitted. The electricity so constantly and so liberally supplied by the various decomposing processes in the animal economy, cannot be merely for the purpose of supporting animal temperature; it must have some other important work to perform,—and what more likely than to minister to the vital operations in corporeal existence? This opinion is strengthened even when we contemplate the part performed by electricity in the generation of force and motion in the inorganic portion of the material world.

It has been demonstrated by experiment, that, independently of vitality, the functions of a nerve can be performed by an electric current. An able physiologist writes thus:—"This notion has been long entertained by our ablest physiologists, as experiment shows that a current of electricity, sent along the referent nerves, produces effects precisely analogous to those which are consequent on the transit of nervous forces. If it be sent along a motor nerve, muscular action is the result; along sensitive ones we effect the sensation peculiar to that nerve. Thus, by means of a simple galvanic current passed through the eye, we produce the effect of light; through the auditory nerve, that of sound; and the nerves of taste and smell may be similarly acted upon." Dr. Wilson Philip has asserted that he can produce the secretion of the gastric juice by sending a current along the divided pneumogastrics.

The structure of the nervous system goes far to verify the principles here advocated. MM. Prévost and Dumas have long ago stated, that, when a nerve is examined by the aid of a powerful microscope, it is found to be composed of many filaments equal in thickness, continuous through its whole course, and made up each of four elementary fibres: when the nerve approaches its ultimate distribution, the filaments separate from one other, and always cross the muscular fibres at right angles; but, before this separation takes place, the course is generally parallel with that of the muscular fibres. The filaments are

not ultimately lost in the muscular tissue, as is commonly supposed, but either go round a certain number of muscular fibres, and return into the twig from which they sprang; or, after crossing the muscle, enter another nervous twig running parallel to the former. In this way it appears that, in their ultimate distribution, the nervous filaments are so many circular threads or conductors parallel to one another, and at right angles to the fibres of the muscle they supply; consequently, when a stream of galvanic electricity is passed into a nerve, these threads will become the conductors of so many parallel electric currents, and therefore have an attraction towards each other.

I am persuaded that it amounts to demonstration, that the electricity evolved during respiration and assimilation, both primary and secondary, is that which supplies nervous power; and that the structure of the nervous system favours the conclusion that the nervous forces are effected on the principle of a galvanic arrangement. Admitting the truth of this principle, it will follow that suspension or derangement of those provisions which nature has furnished for preserving a continual supply of vital electricity, cannot fail to affect the system prejudicially, in proportion to the amount of the abstraction of vital electricity.

When we contemplate the ordinary symptoms which usher in almost every form of serious illness, the conclusion is at once made in the mind, that the first morbid impression is on the nervous system. The tumultuous form of nervous action which constitutes a rigor, the usual precursor of severe disease, conveys the sensation to those who are the subjects of it as if there had been a sudden abstraction of heat—as if a screw had become loose in the animal machine—as if the whole mechanism of the frame had become disordered. Coincident with this sensation of escape of heat, there is a general derangement of the secretions, and a sudden failure of muscular power.

I do not know on what other theory a more satisfactory explanation could be advanced of the cause of the symptoms above indicated. The galvanic action, and the nervous, are to my mind very analogous. In galvanic arrangements, when the supply of electricity is small, the stream feeble, and the current

broken, and communicated in a succession of sparks, the effects will be proportionally weak, and its operation inefficient. On the contrary, when the supply of electric fluid is abundant, the stream strong and the current unbroken, the power exerted by it will be proportionally increased, and its operation effective. So in nervous currents, when the supply of vital electricity is curtailed by disease of the respiratory organs, and suspension or derangement of the assimilating organs, the amount of electricity given off by these processes must be lessened in proportion to the extent of disease in the former, and the suspension or derangement of functions in the latter. Hence will result imperfect performance of those vital operations which depend on a large supply of nervous power. On the contrary, where the respiratory organs are healthy, the organs of assimilation active and sound, and every vital action vigorously performed, there is a combination of circumstances which constitute perfect health.

I will now endeavour to point out how this theory may be applied to account for the remote cause of disease. In the absence of rational principles on which to found their observations, authors have been tempted to indulge in all sorts of imaginary causes, and that which is the most obscure is the most generally received. As an example of this, the imaginary agent most commonly accused of producing pestilential disease is *miasm*. Now, so far as I know, this miasm is not known as anything tangible—anything appreciable to any of the senses; no search has found out its reality: yet it has been long acknowledged as an operating cause in producing epidemic disease. When we take into account the principles here advocated—viz. that electricity and nervous force are identical, that the electricity evolved from the air in the lungs during respiration, and that separated from the ingesta during assimilation, is that which supplies the vital electricity to the nervous system, and that any cause which hinders the supply, or suddenly and to a great extent withdraws it after being supplied,—there are here an appreciable combination of causes which will injuriously effect the system: taking cold will thus be an easily comprehensible idea. The escape of heat—that is, the withdrawing of electricity from the

body—is understood to be taking cold. The abstraction of vital electricity from a person whose nervous system has nothing to spare, will cause derangements that will be developed in some form of disease; the nervous currents in such circumstances, acting on a secreting gland, may be insufficient to elaborate from the blood those constituents which are required to form the various secretions; and in this manner may the secretion be imperfectly eliminated, and the depuration of the blood incompletely effected; and the retention of those elements which ought to have been given off will give rise to diseases which result from the vitiation of the fluids of the body.

Admitting the truth of this principle, we will examine how it can be applied to account for the prevalence of epidemic disease. This will be best accomplished by first examining what are the agencies which operate in withdrawing electricity from the human body, and then consider what are the conditions of the animal frame which prevent the natural supply of electricity.

Foremost among the agencies which abstract caloric or electricity from the animal body, may be placed that universally diffused element—water. More especially does it operate thus when it is being changed into vapour. When water is assuming the form of vapour, it absorbs an immense quantity of electricity, and it is during this process that portions of the earth, and the objects on it, are, for the time being, deprived of a large amount of electricity. Now it is on the principle that evaporation withdraws from the animal economy the electricity which is evolved during the vital operations above described, and this almost exclusively, that injurious influences are exerted so generally, especially on the predisposed, as are sufficient to cause epidemic and wide-spread disease. In tropical countries the rain falls in much larger quantities than in countries of a higher latitude, and it has all to be raised again by the process of evaporation: it is the solar heat radiated from the earth, and from those bodies which are placed on it, that provides the heat to raise the vapour. It is when this evaporating process is going on that electricity is carried up; while the earth, with the objects on it, are to a certain extent deprived of electricity.

So constantly is humidity associated

with the existence of endemic and epidemic disease, that it may be stated as a general rule, that in proportion to the amount and rapidity of evaporation in any given situation, so will be the extent and virulence of pestilential disease. In all speculations on this hitherto dark subject, whatever has been conceived to be the cause of epidemic disease, it is always supposed that humidity contributes to its virulence, and is indispensable for its full development. Hence it is found that diseases are most prevalent in situations where moisture is most easily and most copiously generated,—in valleys, on the banks of rivers, near shallow marshes, in the vicinity of mangrove plants, and wherever a favourable condition of the surface exists to accelerate the process of evaporation. The rainy season, or rather immediately after it, is well known to be the most sickly in tropical climates.

The insalubrity of those parts, in hot countries, where the sea-coast and rivulets are covered with mangrove vegetation, has been particularly observed. This may be produced by the facilities arising from the peculiarity in the nature and structure of these bushes. The growth is speedy and luxuriant, and the decay rapid and incomplete, as a new plant is engrafted into the stem of the old, which maintains an interminable succession of additional plants, exhibiting in many situations an expansion of rank, and, at the same time, beautiful verdure.

The underlying accumulated vegetable debris are somewhat in the condition of a sponge, absorbing and retaining, at every return of the tide, a large quantity of sea-water, which being acted upon by concentrated solar heat, and a high temperature being produced, under the abundant foliage, the evaporation is both speedy and copious. The unfavourable peculiarity in localities thus situated is in my opinion produced in the following manner:—There is, in the circumstances of the mangrove plants, a continual and abundant evaporation, establishing a constant drain of electric fluid from the district within its influence, which makes it negatively electrified; and the animals being always positive, from the electricity continually evolved by the vital processes, suffer loss of electricity because

of the tendency in this fluid always to produce an equilibrium; the animal suffering in proportion to the amount withdrawn, and to the integrity of the operation of the vital processes. In an open and inland country, on the contrary, which is destitute of marshes and jungle, the humidity is only occasional and short continued,—just in proportion to the amount of rain and the facilities for evaporation. In place of a constant insalubrity, as in situations and in circumstances such as the mangrove plants, there is merely a casual and temporary insalubrity. In marshes and near jungle there is a constant unhealthiness; and it will be found that this mischievous peculiarity is in proportion to the warmth of the position in which the marsh is placed, and according to the persistence of evaporation. On this principle it ought to follow, that cases of ague and other diseases which occur near marshes, will be mild or severe just in proportion to the amount of evaporation, but seldom so virulent as in the situations occupied by the mangrove plants. A marsh is most favourable for evaporation when the water scarcely covers the soil. The cause is obvious: the soil and vegetables become much more heated than water in a large quantity together, as in a lake, or as it exists in the sea; the soil and the vegetables heat the water to a much greater temperature; and thus is produced ready evaporation. There might be cited from many writers on pestilential diseases in tropical countries, examples of wide-spread deadly disease, and at the same time an absence of every other apparent instrumentality. There was no vegetable or animal decomposition, or any other source of insalubrious effluvia, on mere sandy plains, but the speedy evaporation of the recently fallen rains, and the presence of a severe pestilential scourge.

Besides the conducting power of evaporation to draw off electricity from the earth and the objects thereon, there may be some occult influence in operation in the mineral strata that constitute the crust of the earth, of good conducting power, which may disturb the regularity of the distribution, and unsettle the equilibrium of the electric fluid on the surface, withdrawing it probably into more central regions; leaving the surface in a highly negative

condition compared with that in which it was before being thus acted on. In this way may be produced those epidemic and occasional attacks of pestilential disease which cannot be attributed even to the existence of those circumstances which are generally looked upon as remote causes. As evidence that there is more than hypothesis in this statement, I will refer to the observations of M. Andrand, which were made during the prevalence of cholera in Paris in the year 1849. In a communication made to the French Academy, dated 10th July, 1849, he states that his machine was very powerful; and continues,—“I have remarked that since the invasion of cholera I have not been able to produce on any occasion the same effect. Before the invasion of cholera, in ordinary weather, after two or three turns of the wheel, brilliant sparks of fire of six centimetres in length were given out. During the months of April and May, the sparks obtained by great trouble have never exceeded two or three centimetres, and their variations accorded very nearly with the variations of cholera. This was already for me a strong presumption that I was on the trace of the important fact that I was endeavouring to find. Nevertheless, I was not yet convinced; because one might attribute the fact to the moisture that was in the air, or to the irregularities of the electric machine. Thus I waited with patience the arrival of fine weather, and heat, to continue my observations with more certainty. At last fine weather; and, to my astonishment, the machine, frequently consulted, far from showing, as it ought to have done, an augmentation of electricity, has given signs less and less sensible to such a degree, that during the days of the 4th, 5th, and 6th of June, it was impossible to obtain anything but slight cracklings without sparks. On the 7th of June the machine remained quite dumb. This new decrease of the electric fluid has perfectly accorded with the renewed violence of the cholera, as is only too well known. For my own part, I was not more alarmed than astonished; my conviction was complete. At last, on the morning of the 8th, some feeble sparks reappeared, and from that hour the intensity decreased. Towards evening, a storm announced at Paris that the electricity had re-entered its

domain; to my eyes, it was the cholera which disappeared with the cause which produced it. The next day I continued my observations; the machine, at the least touch, rendered with facility some lively sparks.” He states that, in the six days following the 8th of June, the mortality in Paris fell gradually from 667 to 355.

A gentleman in Glasgow, during the prevalence of cholera in that city in the winter of 1849, informed me that he had an excellent electric machine, which at all times yielded large sparks of electricity with the utmost facility. He was very much in the habit of using it, and was well acquainted with the science. He stated, that at the time above specified, when cholera prevailed, he had the utmost difficulty in producing the slightest sparks, notwithstanding the rubbing and heating and brisk turning of the cylinder of his machine. As it was no part of this gentleman's object to trace any relation between this low tension of terrestrial electricity and the cause of cholera, he took no notes nor dates as to the time when the peculiarity began, and when it went off.

From the observations of these two gentlemen, it is evident that there was a connection between the low state of tension of the terrestrial electricity and the existence of cholera. In the one case the evidence was quite unconnected with any idea of theory, and in the other case there were no definite notions entertained by M. Andrand regarding the nature of the connection between cholera and the diminished tension of electricity. He evidently connects the cause of cholera with the amount of electricity existing in the air, as he remarks that “he felt with joy that the vivifying fluid was returning to the atmosphere.”

I consider that these facts are very conclusive in support of the theory here advocated. They distinctly indicate that the electric condition of the mineral strata and superincumbent mineral debris on which Paris and Glasgow rest, were, at the period when cholera raged, in a negative or low state of electric tension.

[To be continued.]

ON THE
SPECULUM VAGINÆ.

BY ROBERT HULL, M.D.

IN the practice of the obstetric art, which includes commonly the treatment of the diseases of women, the patients *must* be subjected to management from which natural delicacy revolts. It is not in unpolluted feminine nature to bear with complacency the needful manipulations of a male accoucheur. Hence delicate and chivalrous practitioners have always endeavoured to mitigate, so far as possible, the shock to the parturient's feelings. Even policy has induced a show of tenderness, when it does not exist. "Declare to the lady that she is perfectly covered," says an impudent class-book, "although she may be perfectly exposed."

It is from respect to feminine sentiments, especially sensitive in English women, that the best accoucheurs make no more examinations than safety requires. Indeed, in such hands the whole process of childbirth is conducted with a decency and quietude which even a husband might witness without disgust or wincing.

But parturition is not the only process which demands great management and decency from a masculine attendant. Disorders of the sexual system and sexual apparatus, in order to be rectified, must expose the sufferers to most distasteful investigations; while they become exquisite tests of the character and feelings of medical practitioners. I assume the purity and principle of the patients. For, whilst it would be horrible falsely to assume the reverse, so no harm can be done by this assumption where principle and purity have fled.

In the medical contrectation of the gentler sex, every female should be treated as if worthy of respectful delicacy;—no exposure, no manipulation, no *inspection* practised, save what necessity, dictated by science and humanity, points out. How far these correct, generous, and religious bounds are observed, can be known only to the conscience of each practitioner. But, if rumours be well founded, it is high time that the fathers, brothers, *husbands*, in Great Britain should rise, with indignant protestation, against the abuse of

the *speculum matricis*. Let them refuse to permit their female relatives to be treated by men, with whom the *speculum* is the *vade-mecum*. Let every British gentleman be sure that this disagreeable practice be *needed* in the peculiar case; and let him demand, if it be asserted that speculation, cautery, &c., be indeed required, that a *second* opinion be obtained, and a personal consultation forthwith held. Why should it be *assumed*, that in cases of vaginal any more than rectal disorder, turpitude, love of lucre, falsehood, are impossible? Everybody knows that the *rectum* bowel has been the pretended cause of most indirect conduct, most direct swindling. If a man cannot gain-say a surgeon who tells him that his disorder results from stricture of the *rectum*, how can a sterile woman refute an accoucheur who tells her that she labours under constricted or ulcerated *os uteri*? If a medical man *be* dishonest, how can the poor dupe detect him?

What scope for an unprincipled man—what boundless scope, when it is considered how anxious married women are to breed—is there for knaves to assure them that they can make them prolific!—that with a *speculum* they can see the cause of their sterility—that with local applications they can remove it!

How easy for a crafty doctor to persuade an unhappy lady that her *os uteri* is closed, and that he must dilate with instruments to give access to the cavity of the womb! although he knows that not only her *os uteri*, but the vagina itself, may be closed, so far as the conceptive portion of generation is concerned.

How perturbed the sleep of that man ought to be, who profits daily by such a figment; and this to the misery, wounded feelings, painful exposure of chaste English gentlewomen, as innocent as credulous! Are not the secret chambers of such a doctor, where women's wombs are impaled with bougies, more hellish, if this be possible, than the recesses where men sit daily with bougies impacted without necessity in their fundaments?

If women are to be thus maltreated—if such nonsense as occlusion of the *os uteri*; if still absurder nonsense, as occlusion of the Fallopian tubes, be promulgated for the pathology of barrenness—why do not the Royal Colleges of Physicians, of Surgeons, interfere? Why

do they not summon such practitioners, and say to them—"Sirs, either you believe that sterility depends upon occlusion of wombs and tubes, or you do not. If you believe this pathology in the middle of the nineteenth century, you degrade our learned institutions by your foolery. If this be not your creed, but you find it lucrative to gull ignorant, credulous women, you still more disgrace our honourable corporations, and we sever the connection." Is it possible that fellows who promise fecundity think that by manual irritation of the textures, by instrumental irritants, they can bring on the desired conceptive action? But

σιγᾶν ἀμεινον τ' ἀσχηρα.

The holding forth to barren ladies that they can be cured if they will only consult Dr. P. or Dr. Q., Dr. R. or Dr. S., is as much empirical as if these worthies paid for barefaced advertisements in the public journals; and they had best at once take to business in this line. For they well know that there is no specific remedy for the barren state; that their beastly *speculations* can produce moral mischief to an awful extent,—physical benefit none; that all that can be done is maintenance of the general health; that medical science hath never reached beyond *this*; that interfering, and the creation of anxious ideas, tend to augment the evil; that the more a woman thinks about this mysterious process, the less chance she has of undergoing it; that the peasantry, and working females in general, are prolific in proportion to their insondiance—nay, in proportion to their wishes *not* to conceive. Anxiety to secure heirs for wealth, for titles, seems to prevent the cherished object.

How is it that in past times uterine and vaginal disorders were treated with as much success as since the era of *speculation*? Nay, were they not treated with more efficiency? For if indeed so much uterine disease exists, as the fashionable diagnosis would imply, uterine maladies are less prevented than formerly, less tractable when they do occur. But I do not believe in this deteriorated state of things, unless women's fears produce morbid physical actions,—unless ordinary affections of the generative structures are magnified into malignity by the wretched mind.

In every direction, one hears of ulcerated vaginæ—of congested wombs—of *specula* wherewith to see the mischief—of lunar caustic applied regularly—of leeches applied to the interior parts. Boys fresh from the hospitals arm themselves with these bestial weapons as freely as with the stethoscope. Even women, brought to believe this practice necessary, send some such message as this:—"Mrs. T. requests a call from Dr. V., and that he will bring his *speculum* with him." Doubtless Mrs. T. thinks that she labours under a morbid uterus, since almost all her acquaintances so suffer *nominally*.

But is simple ulceration, simple abrasion of the vaginal membrane, so dreadful that the indecent *speculum* is required? If the substance of a womb or of its cervix be not involved, is lunar caustic with *manual* application required? If they *be*, can such superficial cautery suffice? For me, I doubt the diagnosis so frequently pronounced. I have been unable always to see the breach, which the *speculator* hath asserted; and if the abrasion be not visible by the medical eye, can it be detected by others? Yet I have heard of a practitioner's requesting a patient's companion to peep through the tube, and convince herself of the disease of her friend!

The bashfulness of women *must* depart if this morally perilous practice be carried on. I recently was consulted on the case of a woman, who for four years had been treated for vaginal malady. A country surgeon sent her into a county hospital, where the surgeon could detect no disease, but he ordered repeatedly leeches to the part. When discharged, she consulted other surgeons and physicians. By all she was manipulated, leeched, cauterised. Nor did she escape months of speculation the more for consulting the pure physician. At last she applied to me, who could perceive no disorder. But the woman insisted that she was still diseased, as before, and was evidently desirous of treatment and *speculation* still.

I adduce this woman to illustrate the moral evil of this incessant handling and spying. She is become either a confirmed *malade imaginaire*, or she is completely regardless of the τὸ σεμνόν.

It is much to be hoped that physicians will not consider the speculum

vaginæ as *their* instrument, any more than the sound for the urinary bladder. It is surely and solely the peculiar of the physician-accoucheur and the surgeon-accoucheur; and whilst it is most desirable that the legitimate *speculators* should avoid the *metroscop*e as much as possible, it is to be deprecated as unprofessional if any but they should use it at all. But if a pure physician doggedly would, after all, claim a right to *speculate*, may he act upon his discoveries? May he manually leech, may he manually cauterise? and if he does, is he not, to use a vulgar expression, unprofessionally "poaching on the manor of the surgeon?" There are some men—there are many men—in our profession, whom no motives can sway save the selfish and the pecuniary. To such persons it is necessary to declare that their doings are not so concealed as they may fancy; that names are mentioned in the provinces, of *speculant* metropolitan practitioners, with vehemence and increasing indignation; that country and family surgeons are about to *select*, with manly determination, the persons whom they will permit their patients to consult,—about to prohibit (and let me warn the delinquents that they *can*) from the *speculigèrent* worthies,—about to direct, with exclusive precision, and without mistake, to respected, venerated accoucheurs, whose unsullied career reminds us of bygone days, and of those virtuous and dignified men who, by the Royal College of Physicians, were once *permissi ad artem obstetricam exercendam*.

Norwich, August 14, 1851.

CASE OF
PURE EPILEPSY
OCCURRING ALONG WITH LABOUR.

BY JAMES DICKINSON,
Surgeon.

IN patients afflicted with epilepsy we are often asked, what is the cause of the fits? a question easier propounded than replied to. The empirical manner in which many cases are treated, the number of new remedies which are continually being brought forward, the several plans of treatment laid down by different authors, and lastly, the unsatisfactory termination of nearly all the

cases, cannot but strike the most superficial observer how ignorant at present we are of the pathology, and therefore of the treatment, of this disease. The cases in which we are able to trace in a satisfactory manner *the cause* of the disease are so few, that I am led to report the following interesting case:—

Anne P——, æt. 18, being six months advanced in pregnancy, fell, on the 10th August, ult., over a pail, about 11 A.M.: soon after, labour pains set in very regularly. I saw the girl about 1 P.M. the same day; the pains were then proceeding with regularity; the os was soft and dilatable, and the head presented. Shortly after, however, the pains ceased, and the midwife sent for me. On my arrival I found the os had discontinued acting, and the girl in a very weak state. I then ordered her half a drachm of the Tincture of Ergot, and to be repeated in half should the pains not come on: she took the second dose about half-past 3 P.M. After this the uterus began, though somewhat slower than it had done previously.

At 5 P.M. I was again sent for, and on my arrival there found the girl in a somewhat comatose condition, breathing stertorously; pulse slow; pupils dilated; and bleeding from the mouth: this latter symptom, on examination, however, I found was owing to her having bitten her tongue. On inquiring of those around me what had taken place, I learned she had had an epileptic fit, and from what the mother stated I was inclined to believe this. She said her daughter, while an infant, had had convulsions, and also that when eight years of age, *during an attack of whooping-cough, she had had fits similar to the present ones*. She (the mother) was also subject to fits of the same kind. After remaining in the house a short time the girl had another fit, which was ushered in by a slight scream: I placed two pieces of cork between her teeth: the fit was of the usual kind, and lasted about eight minutes. One symptom was rather curious, however, and that was, she yawned excessively; in fact, to such a width did she open her mouth, that I entertained serious apprehensions of her dislocating her jaw; and this was followed by a profound sleep. This fit was succeeded by several others, which were of less duration. Availing myself of the assistance of my friend Mr. Carroll, he at once recommended bleeding ad

3viiij. She was shortly after delivered of a dead child by the forceps, the placenta almost immediately following. A roller having been put round her she was ordered to be kept perfectly quiet. This was about 7 P.M. On my visiting her shortly afterwards I found her quite sensible (having been, I should have previously stated, in an insensible state, from the accession of the fits, till within a few minutes after her delivery), and she then stated to me she recollected nothing whatever of what had occurred. Her skin being hot, and pulse rather quick, I ordered her a simple saline, with small doses of hyoscyamus to be taken every four hours, and the last thing at night twelve grains of Jal. c. Cal. I saw her again that night, and for several days afterwards: she complained but little; gradually improved, and is now sitting up, never having had another fit since her delivery.

REMARKS.—The family and previous history lead me to look upon this case not as an ordinary one of eclampsia parturientium, but rather as a pure case of epilepsy, occurring along with, and having its origin in labour, in the same manner as her previous attack while labouring under pertussis. If this view of the case be the correct one, ought our treatment to differ from that generally laid down in books, and if so, what is the plan to be pursued? First, then, with regard to bleeding: I hold that from the very fact of epilepsy being a disease of a most exhausting nature, this and other depletory measures ought to be withheld; and I believe the rapid recovery of this patient is attributable in a great measure to the small quantity of blood lost. Secondly, I should propose early delivery by the forceps, for by so doing you at once remove the cause of the fits; and, Thirdly, the use of ergot ought in *all* cases to be abandoned, from the fact of its having produced in a few cases convulsions and other unfavourable symptoms, and is therefore likely in many cases where the previous history is not clear, to mislead and create a doubt in one's mind, as to whether the fits are not attributable in a measure to the ergot itself. In this case, however, there could be but one opinion,—viz., that it was a “case of pure epilepsy occurring along with labour.”

Blaina, September 1st, 1851.

LARYNGITIS FROM LOCAL CAUSES.

(Read before the *Abernethian Society*,
March 20th, 1851).

By J. A. KINGDON, Esq.

THE habit that prevails among the lower orders (more especially in this metropolis) of feeding their children from the spout of a tea-pot, instinctively leads such children to quench their thirst from the spout of the kettle; and thus it is that boiling water, or the steam arising therefrom, often gets into their mouths, and produces what is known as scalds of the fauces. The effects of such accidents will be best illustrated by the following cases:—

CASE I.—Anne Smith, a sturdy infant, scarcely two years of age, was brought to the surgery of St. Bartholomew's Hospital, with great dyspnoea, on the evening of October the 20th. The mother stated that it had inhaled the steam from the tube of a kettle containing boiling water, two hours previously, she felt quite confident that no water could have entered the child's mouth, as the kettle was nearly empty, and was too heavy for it to tilt. The child seemed frightened at the time, but no ill effects were noticed until more than an hour after, when it became restless, and began to “wheeze” in its breathing. On admission, the tongue, lower lip, and chin, were excoriated; the mucous lining of the mouth was congested and tumid; respiration was very laboured; at each inspiration the nostrils were dilated, the shoulders raised, and the head thrown back: the effort was accompanied with a loud wheezing sound: the skin of the lower extremities was cool, while that of the upper part of the trunk was hot and dry; pulse rapid, but not feeble. The child was very restless, and had constant cough. Two leeches were immediately applied under the angles of the jaw, and fomentations used afterwards: the bites bled freely, and afforded much relief, so that, three hours after admission, the child was asleep, breathing in every respect more quietly. On the following day Cal. gr. j. was given, in combination with the eighth of a grain of the Tartrate of Antimony, twice in the twenty-four hours: vomiting followed its adminis-

tration, and the urgency of the symptoms subsided. On the third day, on account of cough and slightly accelerated breathing, a blister was applied to the sternum with considerable advantage; and at the end of a week the child was playing about at home as well as ever.

CASE II.—A stout child, about three years old, was admitted under the care of Mr. Stanley, having just before inhaled the steam which was issuing from the spout of a kettle containing boiling water. The head was thrown backward; the features were sharp and anxious; the child was very restless, and continually directed its hands towards the pomum Adami; the respiration was hurried on admission, and soon became much more accelerated, especially at intervals, when the dyspnœa became extremely urgent, the countenance dusky, the pulse more hurried, until at last the child would sink back on the pillow with a pitiful hoarse cry, and, completely exhausted, fall asleep for a few minutes. During sleep the respiration seemed much more tranquil; but the little patient would suddenly start up in the greatest distress from dyspnœa. She was ordered to have leeches applied to the upper part of the sternum; Nitrate of Potash, with full nauseating doses of Wine of Ipecacuanha. The relief afforded by this treatment was most marked: the leeches did their duty, and the bleeding was encouraged by fomentations. The child was seen several times during the night, and seemed to be sleeping soundly. On the following morning the improvement witnessed in her condition was quite astonishing. She was sitting up in her bed, playing cheerfully; was rather pale, but her breathing was easy and noiseless. She recovered rapidly, and left the hospital in a few days.

Three other cases of a similar nature have fallen under my observation, in which there was every reason to believe that the inhalation of the steam was the sole cause of all the symptoms; they were counter-parts of those already related. When first seen, the respiration was rapid, laboured, and croupy, accompanied with a short sudden cough. These symptoms were immediately relieved by the application of leeches under the jaw; and the subsequent

signs of bronchial inflammation in all the cases yielded to the administration of calomel and antimony, with counter-irritation over the sternum. Doubtless these cases are among the most mild forms of the affection, and, from the mode of their production, are perhaps scarcely worthy to be called “scalds of the glottis;” yet it is so impossible to divine the extent of the mischief inflicted from the commencing symptoms, that a consideration of them is important to shield the patient from the zeal of those who advocate early bronchotomy in inflammatory affections of the larynx.

CASE III.—Mary Shelley, a plump, healthy child, three years of age, was admitted into the hospital on the evening of October 2d, 1849, with extreme dyspnœa, which had followed an attempt to drink from the spout of a kettle containing boiling water, nearly three hours previously. The mother's statement was, that she had “sucked the steam” from the kettle, but she could not positively assert that no water entered her mouth. When first seen, the child's countenance was bloated and dusky; the lips were livid, the tongue and lining of the cheeks were swollen, and there was issuing from the mouth a copious viscid secretion; the arms and thighs were cold, and the trunk of low temperature; respiration was laboured and noisy, and at each inspiration the nostrils were dilated, the head was thrown back, and the arms twitched convulsively; the pulse was very feeble; the child was very drowsy; when put to bed dozed off immediately, and seemed to breathe more quietly—with less effort. About ten minutes after there was slight spasm of the glottis, which soon subsided. A spoonful of warm milk was put into her mouth, but she was unable to swallow it. At the expiration of another ten minutes—*i. e.*, rather more than three hours after the accident—another spasm of the glottis occurred, more severe and of longer duration than the preceding one; so that, after much violent but ineffectual struggling for breath, the child sank back senseless before respiration again commenced. It was now deemed expedient to open the trachea with all speed, as the symptoms were evidently becoming more urgent, and life seemed fast ebbing. With this intention, the

child was placed on a table, with a pillow to support her shoulders; but as the operation was about to be commenced she was again seized with spasm of the glottis, and after fighting wildly for breath for the space of a few seconds, she fell back exhausted and perfectly motionless. An incision, nearly an inch and a half in length, was immediately made from the cricoid cartilage to the top of the sternum, through the finely-lobular fat, and deepened by rapid strokes of the knife, until the trachea was exposed: the wound being held open with retractors, the cavity was then sponged out; and as there was scarcely any hæmorrhage, three or four rings were divided, and a long narrow canula introduced; yet no inspiration followed. The chest was exposed, and cold water dashed against it: this produced a sudden and full inspiration; but it was obliged to be repeated at intervals for at least three minutes before the natural respiration was established. The lividity of the countenance soon disappeared, the extremities regained their natural warmth, and the child was very shortly asleep, breathing quietly, coughing only occasionally, when the tube became loaded with mucus. In the middle of the night she had another severe fit of coughing: a spoonful of warm milk was given, but as it seemed to be coughed through the tube no more was administered: she soon slept again, and passed a quiet night.

Oct. 3rd, 6 A.M.—She had some difficulty of breathing in consequence of the tube being plugged with thick mucus: it was therefore removed and cleansed; but as respiration through the glottis was still accompanied with noise and effort, it was reintroduced. The lips and tongue were less swollen, but viscid saliva still dribbled from the mouth: she was still sleepy. Towards the afternoon, as the cough was troublesome, and there was a good deal of expectoration, three leeches were applied over the top of the sternum; their application was followed with marked benefit; the cough was relieved, and her breathing consequently was more free. On the following day, October 4, the canula was removed: her mouth had by this time regained its natural appearance, and she could swallow fluid in small quantities without difficulty. On the 6th of October (fourth day after

the operation) a considerable quantity of mucus was expelled from the wound; the cough had again become troublesome: two leeches were applied to the sternum: she was able to speak. On the 11th of October (the ninth day after the operation) she had perfectly recovered her voice, and could swallow solid food. The cough, however, was frequent, and prevented the closing of the wound. A small blister was applied to the chest. The note of the 15th of October is,—The blister rose well, and has been followed by an almost entire cessation of cough: the wound is closed, though not yet cicatrized. She was discharged after a few days.

This case very closely resembles those that were first reported in the *Medico-Chirurgical Transactions* by Dr. M. Hall, and in the *Dublin Hospital Reports* by Mr. Burgess, and by itself would certainly lead to the same conclusion that those gentlemen have deduced from their cases—namely, that early bronchotomy is advisable. But it must be remembered that such cases are rare in comparison with the frequency of the milder forms of the complaint,—at least, if the experience of so large an hospital as St. Bartholomew's is a fair test, or any evidence can be drawn from the paucity of recorded cases: so that we must be careful, in framing the guiding principles of our treatment, to analyse the materials at hand, lest in avoiding severe measures we fall into the opposite extreme, and, as some have done, treat an important subject slightly.

Akin to the cases now under our consideration—indeed they almost belong to the same category—are laryngeal obstructions produced by the local action of corrosive and irritating fluids: and before drawing your attention to some points of treatment, I think the narration of the following case will be found interesting, and applicable to our present subject; for the particulars of which, though the patient was under my close observation, I am indebted to my friend Mr. Wood.

CASE IV.—William Henry Shirwell, two years of age, a plump child, by no means of delicate appearance, was playing, on Feb. 26, 1850, about five o'clock in the evening, with a ginger-beer bottle which contained sulphuric acid. Having removed the cork, he attempted to drink, but was immediately seized with vomit-

ing, and began to cough violently. The retching continued for about two hours, and about ten o'clock P.M. he was observed to breathe very quickly, and with a harsh, croupy sound: he slept, however, at intervals, and was brought to the hospital on the following morning, Feb. 27, at half-past ten o'clock. At that time the child's respirations were upwards of sixty in the minute, accompanied with a harsh, hoarse, ringing sound with the inspiration: there was constant cough, and loss of voice, the attempt at crying giving rise to a rough, barking kind of noise; there was most urgent dyspnœa; the face, lips, and ears were livid,—in fact, were almost blue; the depressions above the clavicles at each inspiration were considerable; there was constant desire to sleep; the skin of the trunk and upper extremities was hot and dry, with the exception of the face, which was covered with perspiration, while that of the lower extremities was cold. The child had swallowed some liquid soon after drinking the vitriol; but at the time of admission he refused to drink. Three leeches were applied to the front of the chest, and an emetic forced down his throat, which acted, but merely emptied his stomach. One grain of calomel was ordered to be given every second hour. In the evening his condition was much the same; was still drowsy; respiration 79; dyspnœa urgent; pulse small. Throughout the following day, Feb. 28, he remained in much the same condition, except that his respiration was rather less noisy. On the third day, March 1st, the breathing was very difficult; respiration 70; was able to swallow some milk. In consequence of the absence of improvement, and the gradually increasing orthopnœa, the leeches were repeated, and another emetic of Ipecacuanha Wine administered, but without benefit: he was ordered to continue the powder every fourth hour, the previous calomel having produced mucous evacuations.

March 2d.—Sleeping heavily, and breathing quickly (65) and laboriously; coughing occasionally. Two more leeches were applied.

3d.—As his breathing was still hurried and laborious, some blistering fluid was painted over the top of the sternum: this by the evening had vesicated freely: he then seemed to be greatly relieved; his breathing was

much more free, and almost without noise. From this time he gradually lost all his symptoms, and recovered speedily without interruption.

It is important to remark, that so urgent were the symptoms on his admission, that tracheotomy was considered inevitable; and, indeed, for the first twelve hours little hope was entertained of his recovering without its aid.

Doubtless in their treatment and in many of their symptoms these cases very closely resemble croup; but the cause and seat of the mischief, and the condition of the patient,—namely, his freedom from the depressing influence of inherent disease,—render them much more under control, although, without some active interference, their termination will be as surely and more rapidly fatal. Of the first four cases* that were published, three died; the fourth "recovered from imminent suffocation after violent screaming;" and in the record of this last case Dr. Hall remarks,—*"The parents of this child suppose that the violence of the screaming ruptured the vesicles by which the breathing was impeded, and thus proved an unexpected means of cure:"* but we must not forget that "this little patient was bled from the jugular vein;" whereas the only treatment mentioned in the other cases is a mixture of oil and mucilage, and the unsuccessful performance in one of them of tracheotomy. Mr. Burgess† has reported two cases in which he performed tracheotomy without any previous treatment; the one recovered, while the other is reported to have died from neglect of the attendants. With such experience, who can wonder that these gentlemen should recommend "early bronchotomy in such cases?" But, happily, later experience and more extended observation have taught us to consider these accidents more calmly, and not employ the severe remedy of surgical interference without testing the benefit of other means, although it demands that we should be ready to do so at a moment's notice. Mr. Wallace‡ seems to have been among the first to maintain the practicability of treating these affections; and his propositions have been supported, with slight modifica-

* Dr. M. Hall, Med.-Chir. Trans. vol. xii.

† Dublin Hospital Reports, vol. iii. p. 380.

‡ Clinical Lecture published in *Lancet*, 1833-4, Part I.

tions, by Messrs. Porter, Ryland, and other subsequent writers. So well, indeed, have his opinions been seconded, that we find one of the most experienced of our surgeons,* while allowing that "the mildest cases are of a fearful nature," asserting that, "by the application of a leech or two, according to the age, and the administration of calomel and antimony, in most of the cases the symptoms have subsided in twenty-four hours; often the breathing has become free immediately after the application of the leeches." This statement is certainly borne out by most of the cases that have fallen under my notice; and it is an interesting fact, that, with very rare exceptions, so far as my search has extended, wheresoever tracheotomy is recorded to have been performed in these accidents, it has not been preceded by either local or general depletion; so that it gives rise to a question whether such operations might not have been often avoided had some such treatment been previously adopted, more especially since Mr. Porter, in his work†, remarks:—"I scarcely recollect a case, even where bronchotomy afterwards became necessary, in which the application of leeches to the throat in the early stages was not followed by a marked, though it might be only a temporary relief; and many cases have occurred in which a perseverance in such a line of practice has been attended with success as decided as it was unexpected." In the third case related above, although the child was apparently dying when admitted, I am inclined to think that the chance that leeches would afford should not have been thrown away: they might have been applied while the instruments were being arranged; and, if placed close under the angles of the jaw, would not have impeded the operation, should it then have become necessary. Again, with regard to the operation of tracheotomy, as has been already stated, we must not regard the laryngitis from accident in the same light as that from disease: in the one the malady is purely local, only secondarily affecting the constitution; while the other is an evidence, or I might say a consequence, of a previously disordered sys-

tem. In the former, time will cure; and, as the vital powers remain strong to the last, operation need not be hastily resorted to: in the latter, however, the prostration that accompanies the affection imperatively demands that operation should not be long delayed, if any benefit is to be expected from its employment.

It would be needless to discuss the advantages of the various modes of treatment that have been proposed,—whether the calomel plan proposed by Mr. Wallace excels the emetic or sudorific systems of others; suffice it to say that all are agreed as to the propriety of early leeching, and the advantage of counter-irritation over the sternum in the later stages; and, in the cases I have now related, these measures were highly effective, and seem to be of most importance.

APHONIA AND OBSTINATE COUGH FROM PROLONGATION OF THE UVULA.

DR. T. C. READY, of Lexington, Mo., records, in *St. Louis Med. and Surg. Journ.*, Jan. and Feb. 1851, the case of a young lady, who had been unable to speak above a whisper for over four years, during which period she suffered from incessant cough, which she said attacked her after exposure to cold. She had consulted many physicians without relief. Upon examination of the fauces, Dr. R. found the uvula enlarged to an enormous size, about one inch in length, hanging over the rima glottidis, and all the adjoining parts inflamed and engorged with blood. "I immediately came to the conclusion," he says, "that the secret of the aphonia and coughing was an enlargement and prolongation of the uvula, and determined upon excision of the same, which I did, and in ten minutes after the operation she could speak as loud as any one in the room, and has continued to improve, from day to day, ever since, so much so that she can now sing a tune in as good style as she could before her attack. A slight coarseness of the voice, and inability to execute high notes in singing, is all the difficulty she experiences. It is a curious fact in this case, that out of some half-dozen physicians who had before attended her, not one had ever examined her mouth and throat, and thus overlooked what would most certainly have relieved her years ago."—*American Journal of the Medical Sciences*, April, 1851.

* Vincent, Surg. Pract. p. 246.

† Surgical Pathology, Larynx and Trachea, p. 184.

MEDICAL GAZETTE.

FRIDAY, SEPTEMBER 12, 1851.

WE are not, as yet, in possession of any information as to the proceedings of the recently appointed MEDICAL CONGRESS or its labours, and though anxious to ascertain the result of the deliberations of the gentlemen assembled on this occasion, we cannot say that we anticipate much benefit from their labours. It is only necessary to glance at the objects in view, to arrive at the conclusion that, with subjects such as are about to be discussed, there is very little prospect that the non-medical, and still less the medical deputies, will be likely to agree on some of the chief points proposed for discussion.

The objects of this Sanitary Congress, we are officially informed, are very comprehensive. The first point is the better regulation of the quarantine laws. It is now officially intimated that, after the resistance offered by the Sanitary Board at Marseilles to the new regulations presented by the French Government, with a view to diminish the oppressive operation of the quarantine system, it was resolved to propose to the maritime Powers—that an inquiry should be made into the true character and effect of the diseases (the *Yellow Fever*, *Plague*, and *Cholera*), against the propagation of which, restrictive measures are adopted in different countries, in order to come to some general understanding on the subject. These are points of great moment, and not only affect the trade and commerce of Europe, but also the lives of the people.

Those most conversant with the system of quarantine, as at present adopted in the Levant, will admit that it would be far better to have no such

restrictions at all; trade and commerce are crippled, and the purposes of quarantine restrictions, as far as the safety of the people is concerned, are worse than useless; much disease is generated, and many lives have been, and are annually being sacrificed to the systems of the Lazarettos in the Levant, especially on the coasts of Barbary, Egypt, Palestine, Syria and Turkey in Europe, and Asia. We are informed by an officer lately resident in Palestine, and holding an official position while resident there for several years, that he and his lady themselves suffered severely from a fever contracted in a wretched Lazaretto at Jaffa, where they were immured for fifteen days, the place being unfit for the reception of human beings, and rife in everything likely to generate plague, cholera, &c. We are further informed by this gentleman, that for every purpose of safety in regard to quarantine and sanitary restrictions it would be only necessary to subject all vessels coming into port with clean bills of health, to a medical surveillance by a European officer of repute. All vessels with sickness on board, or not holding clean bills of health, to be subjected to forty-eight or seventy-six hours' detention in the Quarantine harbour; any longer period than this he would consider quite unnecessary, and he conceives that, to any medical man, persons on board would present indications of disease within this period, if they were likely to become the subjects of either plague, cholera, or yellow fever.

The restrictions as at present observed at Gibraltar, Malta, Alexandria, Smyrna, and many other ports in the Levant, are very stringent, and totally inconsistent with the views of the general body of the profession on quarantine, and the laws of contagion. *

* For cases in point, we refer our readers to a letter addressed to the Editor of the Times paper

The first proposition of the French Government to other European powers was, that a Congress should be held at Toulon, and that each maritime power should send to it two delegates,—one to represent the commercial interest, the other to be a member of the Faculty of Medicine. The suggestion of a Congress was universally approved of; but some of the Powers disapproved of the place of meeting, and proposed Montpellier. On this the French Government proposed Paris, as being central, and affording to the delegates not only immediate access to the best information, but also giving to them the advantage of being able to communicate at once with the embassies of their respective countries in the event of such a course being necessary. This proposition has been acceded to, and the Congress has already commenced its labours.

We are given to understand that the principal question to be submitted to the Congress by the French Government are—1st. *Is the cholera contagious? Are quarantine regulations against this disease necessary for public safety?* In cases of plague, is it safe to adopt the system practised by Austria of allowing the quarantine to commence from the date of the sailing of the vessel from its last port, instead of that of its arrival at the port of destination? Is it advisable to form a general Sanitary Board representing all the maritime powers, and to appoint for each port where a quarantine shall exist a Medical Officer of Health, who shall represent not merely the country in which he resides, but all the maritime powers, and whose declaration shall be conclusive, unless it be set aside by the decision of the Board on the remonstrances to which it may give rise?

These constitute the chief subjects for the consideration of the Congress; and, as we have already said, we are apprehensive that it will be a most difficult matter for the members to arrive at any very satisfactory conclusions, owing to the variety of opinions entertained on these subjects. If we go back to the days of Hippocrates and Pliny, we shall find that the ancients were as divided as moderns on these very points; even the causes of fever were subjects of doubt and dispute. And, again, in Talmudic medicine we find that strict prohibitions were observed more against contact with unclean or diseased persons, as is recorded in the Mosaic code, than against febrile or other diseases not deemed unclean,—such as chronic or local infection. In Pliny's work it is stated that endemic fever was a subject of dispute at the time he wrote; and in his 24 lib. cap. 26, he says,—“*Et primo temporis ac loci vitio, et ægri erant, et moriebantur postea: curatio ipsa et contactus ægrorum vulgabat morbos.*” We may refer to the opinions of a host of writers, ancient and modern; and by one and all we are left in doubt as to the laws by which epidemics arise and are propagated. In the first instance we presume there must be a *punctum saliens*; but how to ascertain this, is the great difficulty. Bacon, Lind, Pringle, and others, leave us in the same position as their predecessors or successors; and notwithstanding the exertions of many zealous modern physicians and surgeons to invalidate opinions respecting the generation of contagious effluvia, facts too stubborn to be swept away by sophistry attest that an effluvium issuing from the bodies of a number of human beings confined too closely, whether in a state of health or disease, will occasionally produce *contagion*, which is capable not only of exciting

of the 4th of January, 1851, and published in this Journal in our number for the 4th of April, 1851, under the head of “The Laws of Quarantine in the Levant,” by J. B. Thompson, M.D.

fever among those confined, but of propagating itself afterwards from them to others. In respect to plague, cholera, and yellow fever, we apprehend it would be very difficult to get any half-dozen medical men to agree as to the nature of the rules that should be adopted for prevention in a sanitary point of view; and it is, therefore, with the knowledge of all these facts before us that we are not very sanguine of any great or permanent benefit emanating from the deliberations of the Quarantine Congress.

In respect to *Cholera*, it is well known that professional men are very much divided about its contagious and non-contagious nature. There are some stubborn facts adduced by advocates on both sides, and these are most difficult to reconcile with either hypothesis exclusively. The reports officially furnished to the Lords of the Admiralty, and certain papers read before some of the Societies during the last session, contain arguments for and against contagion. The various returns from naval and army surgeons engaged in the treatment of the disease during the epidemic of 1849 are inconclusive and unsatisfactory as regards the nature of that epidemic, its causes, progress, and treatment. We find that the cases noticed in some of the reports from the Haulbowline Hospital were treated in a ward by themselves; there was no great restriction enforced, and yet the disease did not extend to any other persons in the hospital or in the island. The greater number of the cases received into the hospital appeared to have been contracted in the most filthy parts of Queenstown. At Plymouth a ship arrived on the 9th of April with cholera on board, and was placed in quarantine, and the disease was not communicated to the inhabitants on shore. But, in May following, a fishing vessel from Dieppe anchored at Noss, a village a few

miles distant from Plymouth. One man went on board this vessel, and on landing he was seized with the disease, which immediately afterwards spread all over the village. On the 5th of June another vessel arrived at Plymouth with the disease on board, which was not placed in quarantine, and the disease immediately afterwards, or about the same time, broke out in several places in the neighbourhood.

How are these facts to be explained, except by the supposition that the disease had been introduced by these vessels, to which no quarantine restrictions were applied? The case of another vessel was mentioned in one of these reports, in which one of the sailors, on going ashore, was seized with cholera by the roadside, and carried to the Chatham Workhouse, where he died; and it was stated that the person who attended him was attacked on the following day, and died also,—affording, in the opinion of the reporter, Mr. Drummond, strong evidence of an infectious communication.*

On the other hand, according to the same authority, a great many cases were admitted into the Infirmary of the Royal Marines without the disease extending to other persons resident in the establishment, and the same was remarked by Dr. Rae, the Medical Officer in charge of the Naval Hospital at Plymouth. It was remarked that during the cholera year, 1849, only *four* cases of the disease occurred among the inmates of Guy's Hospital, although, during that year, 3772 patients were admitted into

* This is the species of evidence from which we infer the contagious propagation of small-pox and other diseases of an undoubtedly infectious kind. It is a remarkable fact, strongly and justly insisted on by Dr. Bryson, that in all European and American islands cholera has invariably made its first appearance in *sea-port towns*, not in mere villages bordering on the sea, and exposed to equal maritime influences, but in towns actually engaged in commercial intercourse with countries where this disease existed. A fact of this kind cannot fail to arrest the attention of the Congress.

the establishment. The four cases occurred at different times, in different wards; and there was no propagation of the disease among the patients of the wards in which the cases respectively occurred. It may be observed, however, that the possible importation of the disease by ships into sea-port towns is one question, and its mode of propagation in workhouses and hospitals, when once imported, another. The facts observed by Mr. Drummond and Dr. Rae may not be so conflicting as they at first sight appear. There may have been as much difference between the sanitary condition of Chatham Workhouse and the Infirmary of the Royal Marines, as between Drouet's Establishment at Tooting, and the clean, lofty, and well-ventilated wards of Guy's Hospital.

The several reports go to prove that the cause or causes of epidemic cholera depend on a peculiar state of the atmosphere, resulting from unknown changes, or from admixture with telluric emanations. These opinions not being supported by any established facts, nor deducible from the phenomena attending the spread of the disease, could not be considered tenable, inasmuch as the epidemic cause of cholera did not appear to be influenced by changes in the atmosphere; again, if there did exist an epidemic cause it must depend on local emanations, but as to whether these were of a personal or terrestrial character remained yet to be shown. The state of the weather had no effect whatever on the disease, neither did it appear to be influenced by meteoric agency, or by season or climate. The influence of local causes, such as accumulations of filth, and nuisances generally so called, and the putrid effluvia of the same, tended to aggravate the disease, and seemed to establish the conclusion that these were at least fertile sources of the evolution

of the epidemic; but still it must be admitted that before cholera even made its appearance in the East, or in Europe and America, these same local sources of the disease were in existence.* There were many cases brought from without into the Naval Hospital at Stonehouse, and yet not one of the residents or patients was attacked with the disease in its malignant form. The case of the Brompton barracks is rather remarkable: these barracks are at a very considerable elevation above the town, where there were 4,000 men: no cases occurred; while the marines, in a barrack at the base of the same height, suffered severely. The residents at Melville Hospital, 300 in number, escaped the disease, although large numbers of cases were treated in the wards. In many reports sent in, the opinion was entertained that the disease was not infectious, but that it was probably owing to, or rather induced by, a deficiency of electricity in the atmosphere.

We hope soon to recur to this subject, when we may be in possession of reports of the proceedings of the Congress, if not of the result of their labours. The remarks now made, as we trust in an impartial spirit, may prepare our readers for some disappointment, from the fact that nothing may be definitely agreed upon after all. Much will depend on the instructions of the respective maritime powers to their delegates. If these are, as we should hope they now all are, favourably disposed towards the removal of the gross and scandalous abuses of the quarantine system, and are intended henceforth

* Thames water has been officially condemned by one medical practitioner on the ground that it has the effect of producing cholera. This theorist has, however, given no reason why, if his theory were well-founded, this malignant disease should not be always among us—why it should have appeared and disappeared in particular years at very long intervals, and why it should have been less severe in London than in continental cities and provincial towns, where Thames water is altogether unknown.

to place it on a reasonable basis, then we do not hesitate to say that the commercial world will derive great benefit from their labours.

We must bear in mind that it was the stringent quarantine restrictions of European powers that first led to the establishment of similar laws by the Turkish, Egyptian, and Tunisian governments; and the latter are now more vigorous in their restrictions than the former, chiefly for these reasons, that they have, with few exceptions, a medical and civil staff of charlatans, composed of renegades or exiled Italians, and revolutionary Poles. These men are supported entirely by the exactions made at their respective quarantine stations; they keep up the alarm of contagion, frighten the Levantine governments, and urge these exactions merely for the sake of increasing their own emoluments.

THE subjoined order respecting the branding of military deserters has been recently issued from the Horse Guards:

“(Circular Memorandum.)

“Horse Guards, Aug. 19.

“In consequence of the diversity of practice and inefficiency of the existing methods of marking the deserter with the letter D, and it being found, in many instances, that the mark has become obliterated in a short time, and even been removed by artificial means, it has been decided that from the 1st of October next this part of the sentence of the court-martial shall be inflicted, in all cases where practicable, in the military prisons, by *the medical officer* attached to each of those establishments, and under special instructions from the Secretary-at-War.”

The degrading effect of this order in converting medical officers of the army into public executioners, does not appear to have entered into the consideration of those who have concocted it. Of late years there has been a tendency to raise the status of the military medical officer, by the enforcement of a more strict and

extensive curriculum of education. Is it now intended to proceed on a different plan; and by transferring to him the duties of the farrier, to lower him in his own estimation and in that of his equals—the military officers of the regiment? Such an order can have no other effect than this, and we doubt not that it will be a subject of indignant remonstrance with every medical officer in the army.

The branding by military surgeons is described in the memorandum as an *improved system*, under which “it is expected that this important part of the sentences of Courts-Martial will be duly carried out.”

We assert that such an order for such a purpose is a breach of faith with medical officers of the army. They joined their regiments for purely *professional* purposes, and not for the sake of carrying out effectually the sentences of Courts-Martial. The authorities have no greater right to impose this penal duty upon them, than they have to compel them to use a musket against a criminal sentenced to capital punishment. This is no part of the bond, and, except by arbitrary and irresponsible means, the order cannot be enforced. The medical officers should show their sense of this degrading treatment by resigning their commissions. If they submit to this instalment of disgrace, they may be prepared for taking the place of the regimental drummer in carrying out the sentence of the lash. The Army authorities may say with some show of truth, that a medical officer must know better than any other man in the regiment, to what extent “this important part of the sentences of Courts-Martial may be duly, safely, and effectually carried out:” hence, if this be a good reason for handing over the branding system to medical men, it will be a still better reason for transferring the punishment of the lash from the drummer to the military surgeon!

Reviews.

On the Preservation of the Health of Women at the Critical Periods of Life.

By E. J. TILT, M.D., &c., &c. Small 8vo. pp. 142. London: Churchill 1851.

THE value of a practical work like that before us does not depend so much upon the originality of its matter as upon the manner in which it is made available to those for whom it is intended. The volume now under notice is not, like too many others on similar topics, addressed to non-professional readers, but is specially adapted to the wants of medical practitioners. There is a large class of these, including the younger members of the profession, to whom the experience of a senior on the delicate and difficult subjects here treated, must be peculiarly acceptable. By a brief statement of the contents of Dr. Tilt's essay we shall afford our readers an opportunity of judging how far it may be regarded as deserving of their attention.

The work is divided into five chapters: the topics embraced in each, we here notice consecutively:—

Chapter I.—On the right management of young women before the first appearance of menstruation.

In considering this subject, the author discusses the ages at which first menstruation occurs in different parts of the world, and arrives at a conclusion opposed to that of Mr. Robertson. According to Dr. Tilt, this function is influenced by climate. Thus the author gives the following averages of the ages at which it appears:—In hot climates, 13-19 yrs.; temperate climates, 14-74; cold climates, 16-53. The entire number of observations from which these are deduced, 11429. At the same time, Dr. Tilt adduces strong support to Mr. Robertson's opinion that variations from the usual period are dependent upon the inordinate stimulus of civilization; inducing, as the result of a vicious social condition, an unhealthy state of the nervous system.

The author points out the evil effects of the improper use of emmenagogues, with a view to the production of menstruation where it is supposed to be

retarded, and offers very judicious advice with reference to the care of the health both of body and mind, before the function is established. The suggestions here given are sensible, and, if carried out, are calculated to produce much good.

The second chapter treats of the management of the female at the time of the first menstruation, pointing out the circumstances which may interfere with the function then and at subsequent periods. Here, also, Dr. Tilt brings under consideration the various derangements to which the menstrual flow is liable, with the origin and treatment of these, and also of leucorrhœa and chlorosis, &c.

In his third chapter, he treats of the conduct of menstruation during matrimonial life, in its connection with abortion, lactation, &c.

Chapter IV. discusses a subject, which in practice is attended with greater difficulties than either of the preceding, viz., the management of women at, and after the cessation of menstruation. The author illustrates the diseased condition of the period by a statistical statement of its natural history, from which it is seen that an excessive discharge most frequently attends its cessation; thus affording an indication for therapeutic measures.

Dr. Tilt relates several instances in which the sudden cessation of the menses had been mistaken for pregnancy, and others in which it had been erroneously treated as a diseased condition. The author enters fully into the consideration of the diseases of this period of life, *e.g.*:—the frequency of cerebral symptoms, as seen in a condition to which he has applied the name of *pseudo-narcotism*, the frequency of spinal and ganglionic symptoms, perspiration, and its therapeutic importance, &c. &c.

In the last chapter the author discusses the principal points to be observed in the treatment of disease generally at this period, and enforces the utility of moderate bloodletting in the cases which he points out as calling for that means. Dr. Tilt also distinguishes the cases in which purgatives are to be used; and he here alludes to a subject which he has recently elucidated, that of menstrual diarrhœa. While reading this portion of his book, we observe that Dr. Tilt has adopted the

term, "generative intestine," introduced by Oken: this may serve for the expression of some transcendental views, but for practical purposes it is objectionable, as leading to confusion. This may be detected even in Dr. Tilt's work, when he speaks of "the *uterine* and *intestinal* canals:" either the latter term must be changed, or its application to the sexual organs abandoned, if precision in the use of professional language be worth preserving.

Our readers will, from the preceding sketch, be enabled to form an opinion as to whether this work deserves the character of utility which we are disposed to assign to it. We think that they will concur in our estimate thereof, which is, that presenting in a condensed form, in clear and elegant language, many very valuable facts in the history and pathology of menstruation, it will be found a useful treatise for consultation. We are satisfied that the author has in no degree exaggerated the evils arising from a neglect of hygienic precautions; and he has not overstated the importance of a more vigilant attention to the preservation of the health of women.

On the Infectious Origin and Propagation of Cholera. By ALEXANDER BRYSON, M.D., Surgeon, R.N. Pamphlet, 12mo. pp. 47. London. 1851.

WITH the view to throw some light upon this vexed question, Dr. Bryson has here examined the Reports which have been deposited in the office of the Director General of the Medical Department, by those Medical Officers of the Royal Navy who have had the best opportunities of observing the disease during its recent invasion. A circular letter was sent to these gentlemen, calling upon them to state their opinions as to the infectious or epidemic nature of the disease, and the facts whereon they grounded their opinions. The documents thus accumulated are necessarily very numerous, and must obviously possess considerable interest and value.

Dr. Bryson quotes fully and impartially from these, and passes in review the several theories that have been offered, criticising them and pointing out the fallacies which they severally present. We quote here the author's conclusions from all that is at present known respecting epidemic cholera.

"As cholera does not, as a general rule, extend with, and in the direction of, atmospheric currents, breaking out consecutively at shorter or longer intervals of time, according to the distance and the velocity of the wind, in places situated to leeward of those in which it makes its first appearance, and over which places the same aerial current must necessarily pass; but, on the contrary, as it has generally, in its epidemic course, progressed with as much rapidity in a windwardly as in a leewardly direction, or in any other direction, it becomes clearly evident that the disease *cannot be the product of any [material] cause generally diffused throughout the atmosphere* [and capable of being conveyed in an aerial current]. As cholera, both in this country and in America, as well as in all European and American Islands, where it is not indigenous, has invariably made its appearance *first in sea-port towns* which were at the time in direct communication with other distant towns in which the disease existed,—as it has never broken out *in the centre* of any one of these islands, and extended to its circumference,—in the interior of America, and extended to its exterior;—we are bound to conclude that it has never acquired epidemic force in either of these countries, or in the islands adjacent to them, *unless when introduced by vessels* coming from infected ports.

"This conclusion appears to be inevitable; because, even admitting that at all times, and on every occasion, it has been the product of an aerial cause—an epidemic constitution of the atmosphere—it will nevertheless be impossible to explain, by any known rule or law in physics, why that peculiar condition or constitution of the atmosphere,—whether it came from seaward, from desolate tracts of land; whether it was generated in the air at the place, or escaped from the earth,—should invariably first manifest itself in sea-port towns, and not in other towns on the sea-shore, in towns more inland, or in the interior, these being equally exposed and equally liable to be the first recipients of any general epidemic influence or cause evolved from the earth, or moving in connection with the atmosphere.

"Like measles, small-pox, scarlatina, and yellow fever, cholera occasionally occurs sporadically; but whether from causes external or internal to the body there are no means of ascertaining. It spreads epidemically only by an infectious principle, which, it is assumed, is generated and evolved to a greater or less extent in every case, whether occurring sporadically or not; the virulence of the poison being in a direct ratio to the amount of morbid action, and its force or reproductive power in propor-

tion to the number of cases contained within a given space.

"The exciting virus, where the cases are numerous and the ventilation defective, may take effect at the distance of one or two miles, if not further; but in contact with inanimate substances it may be conveyed to the distance of many hundred miles, provided the transit be accomplished within the space of about *ten* days.

"Seeing that it has never made its appearance in this country until after it had for some time—for two, three, or four months—prevailed on the Continent, there is every reason to believe that in future its introduction may be prevented by placing judicious quarantine restrictions on vessels coming from infected ports; and further, as its powers of reproduction differ in different places, as they increase in a direct ratio with the increase of cases; and again, as the number of cases increase in proportion as the inhabitants are suffering from mental and physical depression, it is evident that in order to prevent, or at all events to retard the extension of the disease, and diminish the number of cases in those countries into which it has been introduced, it will be necessary to limit as much as possible the intercourse between a healthy and an infected locality,—to prevent all unnecessary intercourse between those that are suffering from the disease and those that are still free from it, and to improve the healthy condition of the inhabitants of places situated at low levels, by the removal of accumulations of filth, by improved ventilation in their dwellings, and by an increased amount of wholesome nutritious diet" (p. 45-47).

We entertain the conviction that these conclusions cannot be disproved, and hope that, if future occasion should require, they may be acted upon.

On the Local Origin of the Yellow Fever Epidemic of British Guiana; in a Letter from Daniel Blair, M.D., Surgeon General of British Guiana, to John Davy, M.D., F.R.S., Inspector General of Army Hospitals, &c. Pamphlet, pp. 35. London. 1851.

THIS pamphlet contains a criticism upon a letter by Dr. Fraser, formerly published in this journal; and also remarks upon a review of Dr. Blair's work, in the sixth vol. of the British and Foreign Medico Chirurgical Review. It contains, also, letters and other documents taking the same side of the question as that

taken by Dr. Blair, viz. that yellow fever is never contagious.*

Herein consists the mistake,—the non-contagionists will not admit the *possibility* of contagion at *any* time. On the other hand, the contagionists do not deny the occasional origin of yellow fever from local causes, and its spread independently of contagion.

The Anatomy and Diseases of the Prostate Gland. By JOHN ADAMS, Surgeon to the London Hospital, &c. &c. 8vo. pp. 160. London: Longman. 1851.

THE author with much truth observes:—

"The diseases of the prostate gland have been so fully investigated by so many able surgeons, and their symptoms and treatment have been so well elucidated, that it appears almost presumptuous to introduce a work on the subject, which can scarcely lay claim to any novelty either in pathology or practice" (Preface).

Although we admit that the author has here correctly characterised his work, we must at the same time observe that he has succeeded in condensing in a useful practical form, the views of Sir B. Brodie, Guthrie, Coulson, &c., with the results of his own experience; thereby giving a comprehensive statement of the several well-known forms of disease, with their appropriate treatment. As such, we recommend this treatise to the notice of surgeons and anatomists.

The Laws of Health in Relation to Mind and Body: a Series of Letters from an Old Practitioner to a Patient. By LIONEL JOHN BEALE, M.R.C.S. 12mo. pp. 306. London: Churchill. 1851.

WITH very much in this work that will be found to possess great interest, there is nothing that may not safely be commended to the non-professional observer of the phenomena of health and disease. The remarks offered upon the causes and prevention of disease are throughout judicious and trustworthy. With some little deduction for a strong phrenological bias, we can commend the author's observations on mental phenomena in their relation to health. We

* Upon Dr. Blair's work, as edited by Dr. Davy, we have already expressed our opinion (vol. xlv. p. 769).

have read this work with considerable satisfaction. We find, however, no matter for quotation, as its contents are already familiar to medical men.

Sunning-Hill Wells; or a Practical Inquiry into the Action of Iron as a Constituent of the Blood, in Health and Disease, in connexion with that Chalybeate Spring. By HENRY HOLMES, M.D. &c. Small 8vo. pp. 103. London: Renshaw. 1851.

THE title-page of this brochure left us at a loss to know whether it were intended as an inquiry into "health and disease" in connection with "that chalybeate spring," or whether it proposed an inquiry "into the action of iron as a constituent of the blood" in connection with the said spring. We suppose, however, that "a little of both" is the object. We opened the book with the hope of finding a clue to the author's intentions. Looking into the preface we find that the author, like Uriah Heep, is very "humble" in his pretensions. He tells us that—

"In presenting to the world this *humble* and very inadequate attempt to draw attention to a subject, not merely of local interest, but of the deepest general importance, the author hopes it will be a sufficient apology if he observes, that it falls as strictly within the province of a medical man to develop the resources of his own neighbourhood, so far as they apply to the prevention and cure of disease, and tend to promote the sanitary welfare of the community at large, as to devote his professional talents to the routine of daily practice; indeed, the conservation of the public health by such means is his *first and noblest duty*."*

In the performance of this self-imposed "duty," Dr. Holmes enters into a very lengthy disquisition, embracing the following topics:—Oxygen and its uses in the animal economy; the structure and uses of the blood-globule; morbid conditions of the blood; anæmia, scrofula, cancer, indigestion, gout, obesity, cholera, &c. &c.; extending over ninety-seven pages. *At the ninety-eighth page* we first meet with a reference to Sunning Hill, at the wells of which place, we are informed, iron exists in precisely that form in which it is met with in *venous blood*—viz., the carbo-

nate of the protoxide. We next learn that this circumstance distinguishes that spring as a most effective chalybeate;

"for the mere drinking of the water cannot fail to ensure the introduction into the circulation of the ferruginous principle in a state in which nature can immediately employ it in the great process of vitalization described in these pages: it is, no doubt, (?) at once decarbonized and peroxidized in the pulmonary capillaries, and united to its structural basis, to form that mighty, though minute atom, the ferro-corpuscle."

The qualities of the water of this wonderful spring, and the rules for drinking it, conclude the work in three or four more pages. Hence it is quite obvious that the whole object of this work might, for all useful purposes of the non-professional public, have been gained in a pamphlet of much less than twenty pages. Although the author, in his preface, professes to deprecate the "ill-disguised advertisements" of popular medical works as dangerous, when the subject is some branch of legitimate medicine, he has attempted to instruct the general reader in some of the recondite processes that have perplexed the most skilful and indefatigable professional cultivators of physiology and pathology. The author observes (we suppose by way of apology),—

"Mineral springs, however, have always presented a topic on which the physician might meet his patient as on common ground; had such not been the case, many of those healing streams which nature pours from her deep laboratory might have remained sealed fountains, or flowed on in darkness, instead of gushing for man's benefit; and, on the contrary, had the profession but dealt more candidly and familiarly with the intrinsic merits of such subjects as cold water and rigid diet, the age might have escaped some sweeping evils which had their origin in the culpable neglect of those wholesome agents."

This may be true; but an acquaintance with the fact, and the whereabouts of a mineral spring, does not necessitate tuition in physiology and pathology. Therefore we opine that Dr. Holmes has passed the limits of professional writing, and has incurred for his book those "objections" which he truly observes that "the really scientific portion of the profession" entertain "on the best possible grounds" against popular medical books. Most certainly Dr. Holmes's

* The italics are our own.

work does not correspond to its title. A "practical inquiry" of the nature there indicated, to have been worth anything, should have contained some original or novel views or experiments in elucidation of vital processes; but these are not to be found in this book, which, in its physiological and pathological information, presents only what is met with in ordinary text-books. We do not say, such as it is, that it is not well written; but fine writing and well-turned periods may be misplaced; and such, we fear, must be said of Dr. Holmes's work on Sunning-Hill Wells.

Proceedings of Societies.

NEWCASTLE AND GATESHEAD PATHOLOGICAL SOCIETY.

February 1851.

On the Treatment of Acute Rheumatism. By Dr. HUMBLE.

THE treatment of acute rheumatism by lemon-juice, which was introduced to the notice of the profession by Dr. G. Owen Rees, of Guy's Hospital, at the commencement of 1848, first attracted my attention in the autumn of that year, and I was induced to recommend a trial of it in the case of a near relative, who was at that time labouring under a very severe form of acute rheumatism, or rather perhaps of rheumatic gout, the small as well as the large joints being involved in the attack. She had been unsuccessfully subjected to the ordinary treatment adopted in this disease, and was then taking large and frequently repeated doses of opium without the slightest alleviation of her sufferings, but after a few doses of the lemon-juice a marked improvement took place, and she passed the night in comfortable sleep, without the assistance of any opiate whatever. In my own case, a rheumatic affection of the left wrist, I was relieved from excruciating pain after taking three doses of this remedy, and I mention this here in order to state a fact, which I have not as yet noticed in any of the papers which have been published on the subject, —viz., the excessive diaphoresis which occasionally follows its use. Although it appears to act chiefly on the kidneys, and thus to cause the elimination from the blood of the morbid matters which give rise to the disease, yet in my own case, and also in several which I have since met with, it certainly not only did so, but in-

duced such copious perspiration as I have rarely witnessed, even after the exhibition of the most powerful diaphoretics. Since the period above referred to I have given it in every case of acute rheumatism which has come under my notice, and hitherto without failure in a single instance.

The cases, fifteen in number (of which 7 were male and 8 female) varied in point of age from 16 to 56 years; they presented the usual characters of acute rheumatism, and were all relieved in a space of time inconceivably short, when compared with that required to effect a cure by any mode of treatment previously known. Indeed, I need only quote the opinion of a late eminent physician, that the best cure for acute rheumatism was "six weeks," in order to show the great uncertainty of the benefits derived from the remedies usually employed in the treatment of this painful affection. Now, although sufficient trial has not perhaps as yet been made of this remedy to warrant us in regarding it as a specific for this disease, yet I must confess I am inclined to adopt it as such from the surprising effects. I have seen to follow its employment. Whatever may be the specific nature of the disease, there can be no doubt as to its inflammatory character, and it is also evident that it is seldom relieved by remedies of a simply antiphlogistic kind: thus bleeding, purgatives, diaphoretics, calomel in large and also in small doses, with or without opium, colchicum, nitrate of potash, &c. have either singly or in combination with each other conducted the disease to a successful termination, but, perhaps, in the next case, have signally failed. The same results have also followed the use of opium in large doses, bark, quinine, cod-liver oil, and the more stimulating diaphoretics, such as guaiacum, with a host of remedies too numerous to mention. But here we have a number of conservative cases taken indiscriminately and cured in a space of time varying from a few hours to ten days, which is the longest period I have as yet found the disease to hold out. In general, considerable relief from the febrile symptoms was experienced in a few hours, and in two only of the cases did the pain continue longer than three days. In one individual only was there any cardiac complication met with, and in this case there was a distinct *bruit de soufflet* accompanying the first sound of the heart, and heard over the region of the mitral valve. He was aged 25 years, by trade a slater, and in consequence much exposed to the vicissitudes of our variable climate. He had experienced two previous attacks of rheumatism, each of which continued for several weeks, and since his last attack he has suffered much from dyspnoea on exerting himself in

the slightest degree: to this period I referred the endocardial mischief rather than to his present illness. When he came under my care he was suffering much from his larger joints, all of which were swollen and painful; his tongue was foul; thirst urgent; skin hot, and covered with sour perspiration; his urine was scanty, high-coloured, and loaded with lithates; bowels confined; pulse 90, soft and regular; no cough; no pain of chest, and auscultation revealed nothing abnormal, save the *bruit* already referred to. He was put upon low diet, and ordered four grains of calomel, with ten of Dover's powder at bed-time, to be followed by a brisk purgative in the morning, and one tablespoonful of fresh lemon-juice every three hours, in an ounce of camphor mixture, with ten minims of tincture of henbane. This last was given with the view to prevent any griping which might arise from the exhibition of the citric acid; but in the cases which I have treated lately I have merely given the lemon-juice in camphor mixture, as no griping has in any instance followed its use. In addition to the above treatment, twelve leeches were applied to the region of the heart, and were followed by a blister. In the course of three days his articular rheumatic symptoms had all disappeared; his bowels had become more regular; his urine more copious, though still dark coloured; his tongue clean; his skin cool, and his appetite much improved, but the endocardial murmur remained. He was then subjected to a mild mercurial course, at the end of which his dyspnoea was completely relieved, and the sounds of the heart had become nearly normal. He was afterwards much benefited by the use of tonics, and has since enjoyed better health than he had done for several years antecedent to this last attack. One other case I shall relate, as it possesses some interesting features.

Mary W., aged 53 years, widow, has led an irregular and intemperate life, being at present the keeper of a low house of ill-fame in Silver Street. Has enjoyed, what she calls, good health, through life, with the exception of two attacks of rheumatism, the former of which was of three months', and the latter of six weeks' duration. She was taken ill on Christmas day, the disease having been ushered in with rigors, followed by heat of skin, thirst, and the usual symptoms of pyrexia, with the addition of violent pain in her wrists and ankles. When I first saw her, which was on the 31st of December last, the pain was slightly relieved in the wrists and ankles, but had migrated with increased violence to the shoulders, elbows, and knees, which were

red, swollen, and exquisitely tender to the touch. Her face was flushed; skin hot; pulse 96, full and bounding; heart's sounds normal; no cough; no difficulty of breathing; thirst urgent; tongue thickly coated with a dirty brownish white fur; bowels confined, and her urine scanty and loaded with lithates. She was ordered farinaceous diet, and to take half an ounce of fresh lemon-juice every three hours in an ounce of camphor mixture, and at bed-time three grains of calomel with ten of Dover's powder, followed by a draught in the morning, composed of compound infusion of senna, with sulphate of magnesia, and a few grains of powdered jalap.

Jan. 1st, 1851.—Much the same. Tongue rather cleaner, and moist; thirst less urgent; bowels have been freely moved; stools *feculent* and dark coloured, but otherwise natural in appearance; urine rather more copious; no perceptible relief from the pain.—To continue the mixture.

Jan. 2d.—On my visit to-day I found her extremely impatient, having had a restless night, owing to the violence of the pains, but I also discovered that, in consequence of a mistake on the part of her nurse, she had only taken her medicine three times a-day. Her bowels were again confined, and as I wished to trust as much as possible to the lemon-juice, I merely ordered her a little calomel, with compound extract of colocynth, without any opiate at night, and to take her medicine every three hours.

Jan. 4th.—Continued much the same as at the last report, until the afternoon of yesterday, when she had two hours of comfortable sleep, and awoke, to use her own expression, "as if she had been in a stove, and drenched with sweat," but perfectly free from pain of any kind. She continued her mixture for a few days, in order to guard against any recurrence of the attack, taking also an occasional aperient; and on the 8th day of January she was ordered our usual stomachic mixture of magnesia with rhubarb and ginger.

On the 16th of January she came herself to me at the Dispensary, and returned thanks for the benefit she had received, as she felt herself perfectly well. I took an opportunity to enquire after her to-day, and ascertained that she had not felt any symptom of a return of the disease. It thus appears that the duration of this case comprised a period of ten days, *i. e.* from the commencement of the attack on the 25th of December to the 3d of January, when she became perfectly free from pain. But of this period six days had been allowed to pass away without any medical interference, so that the time actually spent in taking the lemon-juice was only four

days, during the two first of which the remedy had not a legitimate chance of benefiting her, inasmuch as it was taken at much longer intervals than it was ordered to be given at.

Rheumatism cured by Nitrate of Potash and Opium in large doses. By Mr. J. PEARSE.

Not having confidence in the lemon-juice treatment, I have selected four cases amongst the failures; and, as they are so very similar in all respects, I will not detain you by relating them all, but select one, as the type.

J. B.—, spt., æt. 40, in humble circumstances, was attacked with very severe acute rheumatism; was seen by me on the 24th January, two or three days after the commencement of the disease. She never had it before. She is a washerwoman. Lemon-juice was prescribed, and taken regularly from January 26th to February 10th, fourteen days fully, without any improvement. Colchicum was then administered for four days, and though it produced its usual effects on the bowels, &c., no improvement took place. Nitrate of potash in doses of one scruple, gradually advanced to two scruples, and opium in half-grain doses, were then prescribed; each dose taken every four hours. In four days the disease was entirely subdued, and the patient was able to sit up; after which she gradually improved in health and strength. The large doses were reduced on the 5th day to the smaller ones of gr. xv. of nitre. and gr. $\frac{1}{4}$ of opium: these were continued until all pain and other symptoms were removed, and the rheumatism was cured ten days from the commencement of taking the nitre and opium.

Rheumatism is an inflammation of fibrinous tissues, and in rheumatism there exists a highly fibrinous condition of the blood. Nitrate of potash, I suggest, has the power of holding, or causing the fibrin to be held in solution in the blood, so as to prevent its being deposited during the disease in the inflamed fibrinous structures: this, together with its other therapeutical actions, I take to be the reason of its peculiar remedial effect in this painful disease.

The other three cases which I have selected illustrate the same facts, viz. the failure of lemon-juice, and the success of the nitrate of potash; but they are so exactly similar to the above, that I need not detain you with them; in truth, having heard one, you have heard them all.

Dr. HUMBLE exhibited a

Spleen about the size of a Brazil-nut, and weighing only seven drachms:

It was paler and firmer than usual, and

had been taken from a girl who died of tabes mesenterica. She had been emaciating for several years, during two of which she had been subject to monthly attacks of epilepsy, which had ceased during the last year of her life. The mesenteric glands were very much enlarged, and she appeared to have died entirely from inanition, as no more active cause was discovered. The mucous membrane of the intestinal canal was free from either inflammation or ulceration, which are so frequently found in such cases, and the whole extent of the colon was loaded with fæculent matter, although the bowels had been repeatedly acted on by medicine during the short time she was under treatment. Nothing abnormal was found in the remaining organs, excepting the general pallor of their appearance, owing to the anæmic condition of the whole system.

[Neither the Newcastle Pathological Society, nor its officers, are to be considered responsible for the statements and opinions contained in the preceding or any future communications, which merely express the views of the individual members whose names are attached to them.]

SURGICAL SOCIETY, PARIS.

Sept. 3, 1851.

Treatment of Erectile Tumours by the Seton.

M. MONOD presented two patients on whom he had operated successfully. The first was a girl, fourteen years of age, on whom M. Monod had operated for the first time when she was nine months old, at which time she presented an enormous erectile tumour on the left side of the inferior maxilla. Numerous needles were made to traverse this tumour in different directions, and in ten days free suppuration took place. The needles were afterwards replaced by fine setons. In about a year the cure had been completed, and had remained so, there being at this time merely slight traces of the cicatrices. The second patient was a boy, seven years of age, with a large erectile growth on the palm of his left hand. Setons were inserted by flat needles, and repeated four times, remaining on each occasion between one and two months. The child was perfectly cured.

Removal of the Parotid Gland.

M. MAISONNEUVE, with reference to a paper submitted by M. Gensoul as his title to admission as a corresponding member of the Society, stated, that removal of the

parotid is an operation that should be admitted in surgery, that it may even be performed on old persons, and that of all malignant tumours those of the parotid gland are the least prone to return.

M. ROBERT attacked these propositions, observing that the two cases that had been related by M. Gensoul were not sufficiently precise. M. Robert further doubted the indisposition of cancer of the parotid to return: many tumours that had been removed as malignant had been found to be merely hypertrophied glands.

M. MAISONNEUVE observed that it was not necessary to put a ligature on the carotid before removing the parotid gland. This proceeding had been dispensed with by M. Gensoul.

Pathological Anatomy of a Hydrocele recently operated upon.

M. HUGUIER had, on the 27th ult., operated on a patient, fifty-five years of age, for a simple hydrocele; very little pain followed; death occurred from tetanus on the sixth day after the operation. On examining the testicle, no trace of inflammation was to be found on the scrotal coverings; the tunica vaginalis was thickened and lined by a false membrane; the testicle also was covered with the same. This false membrane was easily detached: the space was filled by a loose cellular tissue containing a limpid citron-coloured serosity. It was clear that in this case the cure would have been obtained by destruction of the serous cavity.

Croup, with Extension of the Membranous Deposit to the Smaller Bronchi.

M. MOREL-LAVALLÉE related the examination of a case of croup in which tracheotomy had been performed without benefit, by reason of the extension of the false membrane to the last divisions of the bronchi.

Popliteal Aneurism.

M. ROBERT presented several specimens of the rupture of the sac of popliteal aneurism.

Hospital and Infirmary Reports.

KING'S COLLEGE HOSPITAL.

Carotid Aneurism—Ligature of the Common Carotid.

A VERY interesting and instructive case of aneurism of the carotid artery, in which it was found necessary to place a ligature upon the vessel, has lately been in the hospital, under the care of Mr. Fergusson.

Cases of aneurism occurring in arteries

which will allow of some curative methods by the surgeon, are always affections of interest, inasmuch as the treatment which can be put in force is often attended with the best results to the patient, and the surgeon is gratified with the measures he has had it in his power to adopt. Accidental circumstances, however, will happen which give much more interest to cases of aneurism: this fact is especially observable in the instance we are going to speak of.

The patient was a woman, between thirty and forty, who had spent a life of dissipation and poverty, and had the aspect of being at least ten years older than she really was. She was admitted into the hospital on Thursday, June 13, having a pulsating tumor on the left side of her neck. Eighteen months previously she had been severely exposed, and one of her toes became mortified through a frost-bite. Six months ago she first noticed the symptoms of her present complaint, which consisted in cough and some difficulty in swallowing, and about the same time she noticed a small swelling in the spot where the tumour now is.

On examination, a tumour was found to be situated in the centre of the left side, just over the locality of the carotid vessels; it extends somewhat equally in all directions, but has encroached more internally, having pushed the larynx considerably over to the right side. Below, it extends to within about an inch and a half of the clavicular and sternal articulation; there was strong pulsation, and a general uniform heaving of the whole mass, and the tumour could not be isolated and lifted from the carotid vessels. The peculiar thrill was very distinct when clasped by the hand. It was pronounced to be an aneurism of the carotid artery, Mr. Fergusson thinking that it was somewhat near the bifurcation. The patient complained of difficulty of breathing and swallowing to some extent; her health appeared to be in general respects but weakly. It was determined that the patient should be quiet for some days, and if no contraindication arose that a ligature should be placed upon the common carotid artery.

On the 15th, two days after her admission, a sudden change had taken place in the condition of the tumor: it had increased in size, and the patient was somewhat suddenly distressed by great difficulty of breathing and swallowing, so that on Mr. Fergusson's visit to the hospital at 2 o'clock he immediately directed his attentions to her. She was very much distressed by dyspnoea; the tumour had become larger, and on its surface it had become red and inflamed, and fluctuation was so very distinct at the most prominent spot that there appeared to be but little

texture between the integument and the aneurismal sac. The woman was in a very low condition, and it was evident that she was suffering much from her difficult efforts at getting breath: there was no expectoration, or but little: a loud bronchial murmur was heard throughout the chest, but it appeared not to arise from an accumulation of secretion within the tubes, the sounds being of a dry character.

It was quite clear that if anything was to be done at all for saving this woman's life that it must be done at once. Mr. Fergusson therefore called together his colleagues, and it was deemed proper that the operation of placing a ligature upon the common carotid artery should be proceeded with at once, and that the circumstances of the case admitted no delay. Consequently the patient was brought down into the theatre, and chloroform was very slowly and cautiously given by Dr. Salter until she was under its happy influence. Mr. Fergusson made an incision between three and four inches in length, commencing it on the lower surface of the tumour, carrying it along the sternal border of the mastoid muscle, and prolonging it on to the walls of the chest. The origins of the sternothyroid and hyoid were divided, by which more room was allowed, and after some very cautious dissection, during which it was necessary to avoid some large veins, the artery was exposed very deeply below the omohyoid muscle, and the ligature was placed around it without any difficulty, and with the slightest disturbance of parts. The wound was closed, and the patient, who had remained perfectly under the influence of chloroform during the whole time of the operation, was removed to bed.

At 4 o'clock the breathing was more regular; pulse 86; cough, and tracheal irritation.

At 8 o'clock the breathing was more regular, and the pulse was only 90 in the minute; the tumor was less tense than before the operation was performed. At 10 o'clock the breathing remained much in the same condition, but the pulse had risen to 120 beats, and the patient gradually got worse, and having been slightly convulsed, died at 3 o'clock in the morning, just about twelve hours after the operation was performed.

At the post-mortem examination, which was conducted with very great care, it was found that the aneurism was situated just at the bifurcation of the common into external and internal carotid arteries: the tumour was as big as the fist, and was filled with a quantity of coagula. The tumour lay quite contiguous to the larynx; in fact, when the finger was placed into the sac, the thyroid cartilage could be felt

as a portion of its inner wall. The pneumogastric was closely attached to it behind, and both these parts must have been greatly compressed. The ligature was found to have been placed about one inch and a half below the aneurism. The organs of the thorax were examined; the heart was flabby and weak, and there was some considerable amount of deposit upon the walls of the aorta, showing that the arterial system was in that condition which is found to be so favourable to the supervention of aneurism. The brain was examined with some care with a view to ascertain if any perceptible lesion had occurred in consequence of the sudden cutting off of the supply of blood, but Dr. Todd, who was present, stated it to be perfectly healthy. It may be mentioned that there was no aberration of the peculiar functions of this organ previous to death.

So many operations have been performed upon the chief arteries of the body with success, that most surgeons, if not familiar with the practice, are at least conversant with the history and literature of this species of operative surgery, and the results of these proceedings have been such as to induce the surgeon to put an operation in force when such should be found expedient and the circumstances warrant the necessity. Consequently, the mere recital of an ordinary case of this kind would, with many, fail of exciting any interest, and even convey but little amount of instruction. But when certain phenomena have occurred in connection with an individual case, which are not frequently presented to our notice, and which render the treatment more complicated, or suddenly call for the operative procedure which might have been put off for some time, our interest is excited, and the measure of instruction we may learn is by no means limited to that which is gained by the observation of only ordinary, and, we may say, straightforward and uncomplicated cases. We have had occasion not long ago to notice, with particular care, an instance of aneurism by anastomosis in the leg which presented features of great interest and difficulty, and these were enhanced during the length of time that the treatment lasted. In this peculiar instance of vascular tumour circumstances obtained which were very rarely, if ever before observed, at least at this hospital, and the lessons which were imparted to our mind during the long period which we had the opportunity of watching it were very important, and such as are not likely to be forgotten. In the case now under notice one single occurrence took place which shows in what precise manner the treatment of an aneurismal tumour may become complicated, and how,

independently of the operation, an unusual amount of interest was attached to the case. When the patient was first admitted there was nothing peculiar about the case, it being a simple aneurism, and there were not even any of those difficulties of diagnosis in connection with it, as there not unusually are, especially with aneurisms seated in this region of the body. So far, then, the case was simple enough, and it was very evident that the only remedy was the ligature of the common carotid artery, a plan which Mr. Fergusson intended to adopt in the course of a few days, after the patient had been allowed to remain quiet, and had accommodated herself to her new situation. But, as has been seen, circumstances arose which were not looked for, and which rendered it necessary, if life were to be attempted to be saved by the means of the surgeon, that a decided step should be taken. This occurrence was the sudden increase in the size of the aneurism, and such an appearance over the most prominent portion of the tumour that it was too apparent that those changes in the integuments were taking place which precede the bursting of the aneurismal sac. In addition to this, the respiration had become suddenly embarrassed, and this difficulty increased in proportion with the size and heightened impulse of the tumour. The windpipe was pushed considerably over towards the right side, and it was clear that a great amount of pressure was being exercised upon that organ. This aggravation of the disease occurring so suddenly, made it necessary that no delay should be indulged in if any attempt were to be made for the purpose of saving the life of the patient by surgical interference: for either the woman must soon die from the impediment to the respiration, or the tumour would inevitably burst externally, if it did not do so internally. The question for consideration was, as to whether the patient would be able to survive the proceeding, and whether she had not already commenced to die, for there was already considerable failure of the powers of life. After a careful examination, however, it was determined upon by Mr. Fergusson, and his colleague Dr. Todd, that the patient ought not to be allowed to die without a chance being afforded to her by the operation; Dr. Todd very properly observing that, even if the vessel were not ligatured, it would be necessary in a short time to open the windpipe to prevent the woman dying from actual suffocation, so great was the pressure upon that tube.

Although the woman died very shortly after the operation, it is hardly just to attribute her death to that proceeding, for the shock was by no means great, and im-

mediately after recovery from the effects of chloroform the woman appeared to be little affected by it; and in fact death seemed to come gradually on without any particular symptoms than those which were present prior to the operation. Enervated and worn down by excesses as this poor woman was, it was not likely that with the diseased condition of the arterial system and weak state of the heart, as was afterwards discovered, she could stand up against the effects of her malady. Had the operation been done when she first was admitted it is possible that she might have recovered, but at that time there were no symptoms which were sufficiently urgent to call for immediate operation, and there was no indication of what in so short a time did take place.

The case we have no doubt will be looked upon so far interesting as it illustrates an accidental circumstance which may suddenly occur to complicate the disease, and call for the immediate application of the ligature.

Gangrene after Amputation of the Toe in consequence of the Diseased Condition of the whole Arterial System.

A case of considerable interest, and of some perplexity, has, during the last few months, been under the care of Mr. Fergusson in this hospital, and it will be seen that it well illustrates a disease which is more or less frequently seen (but not perhaps to such an intense degree as was observable here), and the effects of the pathological change which had occurred in the arterial system. As the treatment of the case extended over a long period, we shall merely give an outline of the main features of it, and not minutely chronicle every circumstance and change which occurred during the course of some six months.

The patient was a short, thin man, of unhealthy appearance, and looking older than he really was, his age being 57. He had been a labourer during his life, and residing in a country district. He was admitted into the hospital in January, in consequence of his having an intractable and painful ulceration of the right great toe. He stated that, during the last winter, he was much exposed to cold and vicissitudes of the weather, and that both his feet became frost-bitten. Poultices and simple remedies were applied, and the left foot got perfectly well, but he could not cure the great toe on the right side. The nail has been twice reproduced and twice destroyed. On admission, the phalangeal extremity of the toe was very much swollen and inflamed, more especially on the under part of the ball, where there is situated a nasty unhealthy looking ulcer, which leads down

to a portion of the phalanx in a state of necrosis.

About a fortnight after the patient was brought into the hospital, Mr. Fergusson removed the diseased extremity of the toe, and found a portion of the last phalanx in a state of necrosis. A sufficient flap of soft parts was left to cover the wound. On Feb. 7th, which was three weeks after the operation, the wound had not united, but was very swollen and painful, and in a few days the flap sloughed. The patient was low and irritable, and in pain, the countenance indicative of mischief; the pulse quick and irritable. He was allowed liberal support. A portion of slough was brought away from the wound, and, for a short time, it looked pretty well, but there was no healing process, and, on March 20, the foot became painful and inflamed, and gangrene seized upon the stump. In a few days a distinct gangrenous spot showed itself at the root of the great toe, and a well-marked redness had extended to the ankle: the pain had become very severe, and it was necessary to give him opium twice a day. The gangrene gradually spread up the foot, and the pain became of a more severe and burning character, and he got but little sleep: still, no line of demarcation formed, and it was not considered judicious to perform amputation higher up at present.

Early in April a distinct line of demarcation formed on the dorsum of the foot, but the gangrenous destruction seized upon and spread along the sole, and nearly the whole extremity of the foot became completely destroyed, the disease still slowly spreading upwards, and reducing the health of the patient, who suffered intensely from pain, which failed of being allayed by large quantities of opiates. It was hoped that a distinct line of demarcation would form, and allow of amputation being performed, for whilst the disease was still active, and the patient in such a miserable state, it was not thought proper to perform any operation: every thing was tried to ameliorate the man's condition, but the disease kept on slowly spreading, and threatened to destroy the life of the man: consequently, after waiting until July 19th, Mr. Ferguson determined to amputate the limb so high up that there would be less chance of the mischief again attacking the stump: consequently on that day he performed amputation just below the knee, and even during the operation the cause of the disease was found out, for on relaxing the tourniquet no vessel bled but a vein and a few small arterial branches, which latter were ligatured. On looking at the anterior and posterior tibial vessels in the amputated limb, they were found to be pervious,

although it was conjectured that these trunks were obliterated as well. Three days after the operation a suspicious-looking appearance was found, about the size of a shilling, on the outer part of the upper flap, and on the next day this put on a decidedly gangrenous hue, and from this time the return of the old malady became evident. This process spread much more rapidly than it had done previously; the flaps became so much destroyed that when his death took place on the 18th of August, there were only about two inches of the lower flap left. Somewhat curiously, he felt now hardly any pain, except when the stump was dressed, but he complained of much pain in his back, although there were no bed-sores, notwithstanding he had lain so long.

A post-mortem examination was made. The flaps, as before stated, were nearly destroyed, and the bone protruded greatly, and was in a necrosed condition. The viscera of the abdomen were healthy; the lungs were soft and congested. The heart and aorta were carefully taken out, and the vessel dissected out until it terminated in the stump, and it was now found what extensive disease there was in the arterial system. The heart itself was without actual disease, although it was soft, and the arch and abdominal aorta, to the extent of some inches, were in a perfectly healthy condition, but, just where it bifurcated, the diseased appearance manifested itself in a firm, atheromatous, almost bony deposit, in the middle coat here and there. The most extensive disease was in the superficial femoral artery, from just below the profunda: the whole of the middle tunic of the vessel, for the extent of some four or five inches down, was so metamorphosed by the bony deposit, that it had converted the vessel into a solid tube; below this, just where it became popliteal, the artery was obliterated by a firm fibrous coagulum. Attention was now directed to the vessels of the side which had not been diseased: the femoral was first cut down upon, and a portion removed: this was also greatly diseased, but not to such an extent as on the other side. Two inches of the popliteal was cut out and examined, and this also was found to be in as bad a condition as the femoral on the other side: the posterior tibial behind the malleolus was looked at: this vessel also was much, and in a similar manner, diseased. But it was not confined to the arteries of the lower extremity, for on looking at the humeral on the left, and the radial vessel on the right, a large amount of the same deposit was found in them. The arteries of the brain, unfortunately, were not examined.

It is by no means a rare thing to meet

with instances in which the arterial system is in a more or less diseased condition: the subjects of this morbid change being very old persons, or younger ones having long lived under very depressing causes. With the occurrence of this morbid conversion of the arterial tunic are associated certain maladies which render the disease instructive and interesting. But we apprehend it is not often that an opportunity presents itself to the pathologist of meeting with a case in which there was such an extensive amount of disease in the arteries as was observed in the case under notice. There can be little doubt that it must have been coming on for some considerable length of time, and it is rather remarkable that the effects of this condition of the arterial system had not been observed at an earlier period. The morbid phenomenon, however, which did present itself, was extremely interesting; the diseased condition of the great toe, the intractable ulcer, and the death of the portion of bone, were no doubt all due in some measure to this diseased condition of the vessels of the leg. But there was another element in the pathological condition of the vessels on this side which was wanting on the other, and which will account for the effects observed. It will have been seen that the foot on the opposite side was originally diseased as well as the other, but still under simple treatment this got well; not so the other, and after death the cause of this incurability of the sore was found out in the popliteal artery being obliterated for some inches: and the circumstance of the flap of the great toe having sloughed, and the subsequent spreading of gangrene up the foot, was doubtless due to the same cause. The gangrene which attacked the stump in the leg was probably not merely continuous, and excited by the knife, but was also caused by the obliteration of the popliteal artery. If it had been ascertained previous to any operation that the popliteal artery had been impervious, and amputation had been performed above this vessel, the patient might possibly have been saved, but of course nothing of this nature was suspected; and in such a deeply seated vessel as the popliteal it would have been somewhat difficult to ascertain whether it was obliterated or not. This case teaches us that it would be well in every case of gangrene of the extremity which cannot well be accounted for, to examine with great care all the vessels, so that if there be obliteration of any portion of the trunk, the amputation which may be necessary, should be performed at a spot above where the vessel has been blocked up.

Medical Trials and Inquests.

ALLEGED MURDER BY THE ADMINISTRATION OF STRYCHNIA—TRIAL AND ACQUITTAL OF THE ACCUSED.

A SUSPICION has arisen that the prohibition of the sale of common poisons such as arsenic would have the effect of inducing criminals to resort to the use of other poisons equally deadly but much more difficult of detection in the dead body. Strychnia is largely sold in some agricultural districts for the purpose of poisoning vermin and destroying game, but we have not heard that this poison has been criminally administered in any part of this country. The number of the *British American Journal* for July contains a very full report of a recent trial in Canada, in which a woman was charged with having caused the death of a man by wilfully administering to him strychnia. The case against the accused was chiefly based on circumstantial evidence and moral presumptions of her guilt. We subjoin an abstract of the facts proved at the trial, and a report of the *medical* evidence.

A woman named Azenath Smith was indicted for the murder of John Freeman, alias Elijah Pease.

Deceased was an old man, who had left his wife and family apparently with the design of cohabiting with the prisoner, and in the month of March 1850 took lodgings at a place called Mill Creek. He had with him a large sum of money in cash, and a horse and chaise, and he stated to the person at whose house he had hired lodgings that he was desirous of purchasing a farm in the neighbourhood, and had come there with that intention. He also said that he expected his wife would soon join him. After deceased had been there about a week, prisoner came, and she represented herself as his wife: he called her Mrs. Freeman. The prisoner arrived on Wednesday the 9th April. The deceased, who had been in remarkably good health, was first seized with a fit on the Friday after her arrival.

Venton, the landlord, deposed that—

“On Friday morning, at breakfast, Freeman cut off a piece of pie—did not eat it—seemed suddenly taken sick, and pushed his chair. Said he did not know what was the matter with him. Was in good health apparently before this, except being troubled with rheumatism. Deponent and Mr. Lake assisted deceased into another room, and he sat down upon a sofa, and seemed to get worse. Stretched out his legs. Could not bear any one to touch him. Complained that his limbs were stiff. Could not bear his toes or his feet to be touched. Sweated

terribly, and appeared to complain of his head. His feet were put in hot water. Made some ginger-tea for him. This was immediately after breakfast, with deponent and his family. Never lost his understanding, and recovered in about an hour. His wife (the prisoner) was present. She came into the room. He called the complaint spasms. After he got better, the deceased walked about and said he never had such cramps before. On Saturday, Freeman and his wife rode out—when they returned they had tea. Deceased appeared quite well on his return. All went right enough till he went up to bed. About 9 or 10 o'clock, when witness was about leaving the bar, his brother called him back with the candle, as Mr. Freeman had had another of those turns. Mrs. Freeman had not gone up. When witness went up, deceased seemed to be getting worse. Would not consent for some time to have a doctor. Two hours elapsed before he got one. In the meantime witness sent for Mr. Savage to give him some more cholera medicine. Deceased continued in the fit all night. Passed from one fit to another during the whole night. The effects of those fits appeared very distressing. His limbs became very stiff, and he shook all over his body, and sweated terribly."

Deceased ascribed his attack to some pills which he had taken. Deceased appeared better on the Monday; he got up and came down stairs. In the course of this day it was inferred that he took more pills, and it was proved that he asked another of the witnesses to give him something to take the *taste of the pills* out of his mouth. This witness did not know at what time he had taken the pills. Soon after the application for something to take away the taste, witness heard a great noise in the sitting room, ran in, and found deceased very ill, and before medical assistance could be procured deceased was dead. The landlord, who was present on this occasion, thus describes the state of the deceased:—

"Witness pulled off his boots, and put his feet in hot water. He kept getting worse. The jerking of his limbs became faster and faster, his ankles were turned or twisted quite round, his toes were turned right up, and the knee-bones appeared thrust out of their place. Freeman told witness to run for a doctor, if he could do him any good. He turned to witness and said, 'Friend, I will die.' He repeated this three times—'My time is come,' 'Friend, I will die.' His head was drawn right back. A young man ran for a doctor, and witness also started for one himself. Met the doctor coming, and drove back with him to the house. When we arrived Freeman was dead. His head was drawn right back.

His legs were straightened out stiff. The knee of one of them was twisted right round. The prisoner did not enter the room at the time deceased died. He died about 3 o'clock, P.M."

Another witness stated that he "was in the house at the time Mr. Freeman died. He came into the bar-room and asked for something to take away the taste of the pills from his mouth, he then walked about a few minutes on the verandah, then went into the room, and died soon after. Witness was present at his death. Don't know the time he took the pills.

"Cross-examined by Mr. O'Reilly.—From the time the old man left the bar-room till he walked on the verandah might be 15 minutes. Freeman only walked across the verandah once or twice before he took the fit; he then walked back into the sitting room, and lay down on the sofa."

The prisoner gave orders for the interment of the body on the following day, and she sold the horse and chaise at a price considerably under their value. There was no suspicion of poisoning, and the witnesses thought death had been caused by an attack of apoplexy: she left the house, but was subsequently arrested. The medical evidence was to the following effect:—

"Dr. P. Yeoman—Is a medical practitioner, residing at Mill Creek; was called to see the deceased on Saturday night; was unwell, and could not go; sent some medicine (laudanum), 10 or 15 drops of which were to be given at short intervals until relief was obtained, or 60 drops were taken; went to see Freeman next morning; the first person witness saw was Mrs. Freeman, who asked him to come and see her husband; found him better, lying in bed; asked him if he could move his leg when he had the cramps; he said the pain came in 'shots,' like electricity; he said he never had such spells before; asked him if he had taken anything previous to being attacked; he or Mrs. Freeman answered he had taken two 'Sovereign Balm of Life Pills;' I asked him if they had purged him—he said they had not; I advised him to take more cathartic medicine; his pulse was natural, and his mind clear. On Monday afternoon I was again sent for about 3 o'clock; found the deceased in a reclining position in the corner of a sofa, his body bent back, presenting an appearance of general spasm: he was just dead; from the first, witness suspected the death of Freeman was caused by strychnine, but upon consideration thought it best for a time to conceal his suspicions, and allow facts to develop themselves; had therefore encouraged the belief that the deceased had died of apoplexy, and the better to forward his plan had advised prisoner to have deceased buried at Waterloo,

where the ground was dry and sandy, as the body would there be less subject to decomposition, and consequently better adapted for after-examination. Witness assisted at the post-mortem examination; found the head, thorax, and abdomen healthy; assisted to take out the stomach to be given to the Coroner; witness was present when the contents of the stomach were tested, and found them to contain strychnine; and taking into consideration the symptoms, and the analysis of the stomach, has no reasonable doubt regarding the deceased having come to his death by strychnine.

"John R. Dupson, M.D., sworn—Practises medicine in Kingston; was called by the Coroner to make a post-mortem examination of the body of deceased; the body was disinterred; the examination was made in the Town Hall, at Waterloo. The countenance was calm and mild, more like a person asleep than dead; extreme and rigid spasms of the lower extremities. The soles of the feet very much arched; toes were drawn forcibly towards the dorsum of each foot—the foot itself presented the appearance of the letter S. There was a cicatrix of an old and extensive wound in the upper part of the right thigh, near the groin. Opened the chest and abdomen; the heart was empty in all its cavities, and healthy; the valves of the aorta were slightly ossified, nothing more than might be expected in a man of his age (67 years); lungs healthy; stomach healthy; tied the stomach at both orifices, and separated it from the body. Opened the skull, and examined the brain—found it healthy. After taking out the brain, depressed the neck and shoulders, and passed the handle of a scalpel into the spinal canal; not any effusion there; placed the stomach and contents in a bottle, and sealed it. The next step: the Coroner applied to Professor Williamson, of Queen's College, to analyse the stomach and contents; the Professor declined, in consequence of going to England in a few days. The Coroner wished me to proceed with the analysis. I consented, provided I could procure pure tests. Dr. Stewart also communicated with the Professor of Materia Medica, McGill College, Montreal. I proceeded to analyse the stomach and a portion of its contents. The stomach contained $7\frac{1}{2}$ fluid ounces, $2\frac{1}{2}$ ounces of which were subjected to analysis. The stomach itself was cut into small pieces and put into a glass retort, and digested in boiling distilled water for two hours, then poured off the distilled water, and digested the stomach in boiling alcohol to dissolve the remaining strychnine, as it is very sparingly soluble in water, even at the boiling point; during this time the portion of the contents (juice) subjected to analysis, was put

into an evaporating dish and placed in a sand-bath, and kept the bulb of a thermometer in the dish all the time; never allowed the temperature to rise above 180 degrees Fahrenheit; when evaporated to the consistence of syrup, mixed it with the distilled water and alcohol in which the stomach had been digested; then heated the mixture to 100 degrees, and filtered; washed the residuum on the filter with more alcohol to carry through any strychnine that might remain there; then proceeded to evaporate the liquid cautiously as before on the sand-bath for five days; then tested it and found it very acid; neutralized one-half with hydrate of lime; poured boiling alcohol on neutralized substance; filtered again to separate the acetate of lime (?); washed the filter with more alcohol; evaporated to the consistence of thick syrup, and to this applied the tests; the portion neutralized by ammonia was put into a retort, and the ammonia distilled off; this was also evaporated to the same consistence as the other, and to it the tests were also applied. The tests used were those known to the profession as the tests of Marchand and Otto: the former, or Marchand's test, consists in adding one pint of nitric acid to 100 parts of sulphuric acid; the substance supposed to contain strychnine should be carefully mixed with these combined acids, and a small portion of peroxide of lead then added; if strychnine be present, on stirring the mixture with a glass rod, streaks of a blue colour will follow the rod; this colour is very evanescent, and passes rapidly into a violet, soon changes into red, and after a day or two assumes a canary-yellow colour; this succession of colour is characteristic of strychnine. Otto's test consists in treating the matter supposed to contain strychnine with concentrated sulphuric acid; to this add a very small quantity of chromate of potassa in solution; if strychnine be present, a most beautiful deep violet colour is produced. The results of these analyses gave indication of the presence of strychnine; witness is satisfied that strychnine was present; witness's opinion is that the deceased died from the effects of strychnine. A portion of strychnine was procured from Mr. Brent's; it was put in watch-glasses, and subjected to the same tests as the contents of stomach; the glasses were put side by side—those from Mr. Brent's and those from the stomach; the changes in each were identical [Some of those glasses were here presented to the Court: no person could distinguish the one from the other.] Strychnine is a very violent poison; three quarters of a grain poisoned a girl in the Glasgow Infirmary; and Dr. Warner, of the Vermont Legislature, was said to be poisoned with half a grain. Examined the

pills given me by Coroner—they did not contain any strychnine.

“Dr. John Stewart : Is a Coroner—examined the body of Freeman ; the body was recognised by the friends to be that of Mr. Pease ; the stomach was delivered up in the condition in which I received it ; there could be no introduction of poison into the stomach after I received it, while in my hands ; took the pills from the pocket of the clothes, recognised by the friends as the clothes of the deceased ; gave them to Dr. Dixon in the same state I received them.”

It was proved that on Monday the 14th, the day of the deceased's death, a person resembling the prisoner purchased at a shop in a neighbouring town five grains of strychnine, for which she paid a quarter of a dollar. She said she wanted to kill rats with it. It appears also that on the same morning she informed the landlord she was going to the town to procure some medicine for her husband. On her return she told another of the witnesses that the doctor said her husband would not stand it more than once more, and the prisoner asked this witness for more preserves to give the deceased more pills in. Witness gave her some. There was no evidence that she had seen any medical man on the occasion of this visit, or that subsequently to her return on Monday she gave her husband any pills. This rested only on a presumption from the fact that, after her return from Kingston, deceased, who was better, asked for something to take the taste of *the pills* out of his mouth, and that he was very soon afterwards seized with symptoms of poisoning by strychnia, and died. It was proved that the prisoner was well acquainted with the poisonous properties of strychnia, and had conversed with witness about its use for destroying vermin.

The report does not furnish us with the nature of the defence. We presume it took the general course in these cases, *i. e.* that the evidence failed to make out the charge, and that there was a failure of any direct proof of the administration of poison by the prisoner.

The Jury returned a verdict of *Not Guilty*.

. Admitting that the witnesses were correct in their description of the symptoms preceding death, and that the medical evidence as to the positive detection of strychnia in the contents of the stomach was unobjectionable, there can be no reason to doubt that the deceased died from the effects of this poison. There was no pretence that he could have swallowed it by accident, or with the intention of committing suicide ; for there was no strychnia in the house except that alleged to have

been purchased on the Monday (the day of deceased's death) by the prisoner, and there is no reason to believe that the deceased could have got at this poison except by the prisoner's wilful and guilty knowledge. The evidence, however, clearly shows that deceased had been attacked by similar symptoms on the Friday, after having taken some pills administered to him by the prisoner. The possession of any poison had not then been traced to her. She gave two pills (said by the prisoner to be of the same kind as those administered to the husband) to her landlady on the Saturday, and no ill effects followed : and some pills taken from the pocket of the deceased's clothes were analysed and found to contain no strychnia. To fix guilt upon the prisoner, it must be therefore assumed that she had strychnia in her possession on her arrival at the house on the 9th of April,—that she had two sets of pills, some with strychnia and others without,—that her stock of poison being exhausted, she procured more strychnia on Monday, the 14th of April, and gave some in pills to her husband on her return. The only evidence that he took pills on that day is his own statement, and his wish to remove the taste from his mouth ; and the inference that strychnia caused his death is drawn from his rapid death when in a state of comparatively good health soon after some pills had been swallowed, as well as from the nature of the symptoms preceding death. To connect the prisoner with the administration, there was the fact that the deceased only began to have these attacks *after* the prisoner arrival at the house,—her recent purchase of poison,—and the motive of possessing herself of deceased's property, which may be supposed to have influenced her. We can only ascribe the acquittal to the usual plea in these cases—the want of any *direct proof of administration*, and the great danger of convicting in the absence of such proof.

THE ISINGLASS CASE—TAYLOR *v.* VICKERS.

Brompton County Court.

September 17, 1851.

Mr. DEVONSHIRE, solicitor for the defendant, moved in this case for a new trial, on the ground that the verdict was against evidence. The Judge, without calling for a reply from the solicitor for the plaintiff, refused the application with costs. The defendant had himself chosen a jury, which had decided against him, and there was therefore no ground for the application.

The original claim was for £43. 5s. Under the judgment obtained against him, and irrespective of the costs of this application for a new trial, the defendant has been compelled to pay £53. 18s. 9d.

Correspondence.

THE CUSTODY OF INEBRIATES.

SIR,—Your number of the 29th ult., p. 370, contains an extract from the Boston Medical Journal relative to the formation of "*a hospital for the custody and treatment of inebriates*," which appears to deserve attentive consideration.

The want of such an establishment has often been experienced in the Channel Islands, where the low price of ardent spirits affords to the votaries of Bacchus, whether natives or strangers, males or females, every facility for indulgence in their baneful propensity—nay, it would seem that troublesome relatives and dependents have sometimes been sent across the Channel by parties anxious to get rid of them.

It has been my lot to attend some of these unfortunate beings, and I have long felt that a well-appointed establishment for their temporary or permanent reception might effect incalculable good. The inebriate, amongst the upper and middle classes of society, are generally more weak than wicked—their qualities of heart and head are masked but not obliterated. Religion and philanthropy, interest and national vanity, point to the remedy proposed—a *hospital or sanatorium for inebriates*.

DE BEAUVOIR DE LISLE, M.D.

Guernsey, 6th Sept. 1851.

** If the Rev. Thos. Everest, and other clerical dupes, who, unfortunately, betray their holy calling by pandering to and patronising that absurd and fraudulent system called homœopathy, would turn their attention to this subject, they might be instrumental in reclaiming and Christianising some of the most unfortunate of their fellow-creatures.

DR. MAYNE'S EXPOSITORY LEXICON.

SIR,—My intention of publishing by subscription an Expository Lexicon of the terms in medical and general science is probably well known, from the pretty extensive issue of prospectuses, &c., among the members of the profession in England and Scotland. As, however, a complete circulation of these is more than one pair of hands actively engaged in the duties of general practice can accomplish, I respect-

fully, and, I trust, legitimately, seek the aid of your columns and influence in furtherance of that intention.

The proposed Lexicon is the produce of more than twenty years' labour, intended to supply what, at that remote period, I, as a student, felt to be the greatest stumbling-block in my way—the want of a proper explanation of technical terms, without which the illustrations of the lecturer were unprofitable, and often egregiously misapprehended. To this hour the same want is felt, not only by the student, but also by the practitioner; there being no English work similar to my Expository Lexicon, in extent, character, or arrangement, in existence.

I feel very grateful in acknowledging the courtesy, the encouraging terms of approbation of my work, and the good wishes with which I have been honoured by many of those who occupy the highest places in professional rank. The different constitution of men's minds, however, but perhaps especially the disappointments met with in other works promised in parts, are sad hindrances to the promotion of my enterprise. The reasons assigned for not aiding me are—some think that there are already plenty of lexicons, and, for those who so judge, there doubtless are; some excuse themselves by saying that they are too old to buy or to need new dictionaries. I have been told that personally waiting upon my professional brethren in town and country is the most efficient mode of obtaining subscribers, and I believe it is so; but the cost of time which such a course involves is incompatible with the daily avocations of a general practitioner, to say nothing of the toil, and, in some instances, unpleasantness.

I presume not to offer one word commendatory of the work itself. Were it to prove altogether a failure, the attempt, at least, to do for medical scientific language what has not been done before would seem to merit some countenance from medical men. That attempt absorbed all my leisure hours: I have expended on it much labour, with, I now feel, no small amount of health; and I am bold enough to think that these things give me a title to more than a mere buying effort—to the kindly co-operation of my brethren in forwarding the result, which, if of any value at all, must be regarded as important in a special degree to the entire medical profession. I ask no pecuniary favour, no gratuity, but simply the warrant of a sufficient number of names as subscribers to justify me in bringing out a work too large to be otherwise ventured on. The MS. is completed, and has been shown to influential members of the profession as a guarantee for the

regular appearance of the parts, whenever the number of subscribers shall give a sanction to my going to press. I have already obtained about eighty names, and two hundred more are wanted. In the hope that this communication may meet the eye of some among the many thousand members of our profession who are inclined to aid me, I venture to solicit a place for it in the MEDICAL GAZETTE.

I am, sir,

Your obedient servant,

R. G. MAYNE.

Leeds, Sept. 9, 1851.

Medical Intelligence.

THE SANITARY CONFERENCE AT PARIS.

THE first meeting of the Sanitary Conference took place on the 23rd July, in the hotel of the Minister of Foreign Affairs. It was attended by delegates from Great Britain, France, Austria, Spain, Sardinia, and Greece. The delegates were called together by M. David, Minister Plenipotentiary and Delegate from France, who in a brief address welcomed the delegates to Paris, and expressed a hope that their deliberations would be of great service to the interests of the several States which they represented. The first proceeding was the election of a president of the conference, when M. David was chosen unanimously. This was the principal business of the meeting, which was adjourned for several days to allow time for the arrival of delegates who are expected from Russia, Turkey, Tuscany, the Roman States, the Two Sicilies, Portugal, and others. Great Britain is represented at the conference by Dr. Sutherland and Sir Anthony Perrier, Consul at Brest. It is stated that the French Government attach much importance to the Sanitary Conference.

CHOLERA IN THE GRAND CANARY.

ACCORDING to intelligence of the date of the 1st September, the cholera still continued its ravages at the Grand Canary, but it was gradually disappearing. Upwards of nine thousand persons had fallen victims to the scourge in the island. Teneriffe and the other islands were free from it.

OBITUARY MEMOIR OF THE LATE DR. EDWARD JOHNSTONE.

THE death of Dr. Edward Johnstone, which took place recently at Edgbaston Hall, after an honourable and useful life, calls for more than a passing notice. Commencing his professional career in Birmingham

at a period when comparatively few of the most aged members of the community now living had entered upon their existence, he may be regarded as a connecting link between the present generation and one long since passed away. It was the good fortune of Dr. Johnstone to belong to a family which has added several names to the muster-roll of men who by their high character, attainments, and natural gifts, have adorned the practice as well as extended the boundaries of medical science. On settling here at the early age of twenty-three years, he accordingly enjoyed the advantages which might be expected to result from the possession of a name already associated with distinction in the path of life which he had himself selected, and he had also the additional benefit of the friendly countenance of the late Dr. Ash; but the young physician, it would appear, soon gave evidence that he possessed talents and industry which rendered him altogether independent of such adventitious aids. In a comparatively few years his reputation was placed on a solid and lasting basis; and that increasing years but added to its lustre is conclusively attested by the fact that the completion of the fiftieth year of his practice was celebrated by a public dinner, which was attended by upwards of one hundred gentlemen, a large proportion of the assembly consisting of his medical brethren in Birmingham and the vicinity.

Dr. Edward Johnstone pursued his studies at Edinburgh, where, on the 14th of June, 1779, he obtained the degree of M.D., selecting "*De Febre Puerperali*" as the subject of his inaugural treatise, which, on being published, elicited the discriminating praise of the eminent French surgeon M. de Ponteau. In the autumn of the same year, on the opening of the Birmingham General Hospital, he was elected, with Dr. Ash, Dr. Withering, and Dr. Smith, one of its first physicians,—an early recognition of his professional abilities; and he is probably the only survivor of all those who had anything to do with the establishment of that institution. In the appointment which he held for a number of years, with honour to himself and benefit to the charity, he was succeeded by his brother, the late highly esteemed Dr. John Johnstone. But the record of his services would be very incomplete, did we not mention that Dr. Johnstone was also a zealous promoter of the Dispensary for supplying Medical and Surgical attendance to the sick poor at their own homes. He was an active and munificent patron of every useful and charitable institution; and his able advice was at all times accessible at his own residence to the less

affluent. The one in which, for more than twenty years of his latter life, he took the greatest interest, was the Medical School, now Queen's College. In the year 1824, when Mr. Sands Cox, the founder of the College, submitted to him the plan of the original institution, the doctor entered warmly into the scheme. He afterwards presided at the opening lecture, and was a constant attendant during its entire course. On the plans for the school being matured, he accepted the office of president, and for a period of eighteen years was never absent from the Council Board. When, in 1836, the doctor entered his eightieth year, the Council deviated from its usual course, by fixing its anniversary meeting on his birth-day, namely, the 26th of September. On the same occasion a large body of the students presented Dr. Johnstone with an address. In the year 1840, he presided at the first meeting to found the Queen's Hospital, and although devotedly attached to the General Hospital, as the scene of his early labours, he not only gave the project his unanimous support, on the public ground "that an additional hospital was called for, from the fact that in this great central metropolitan district, intersected in all directions with railway communications, embracing within its range upwards of half a million of people, employed among the deleterious effluvia incident to many of the manufactures, hourly exposed to accident and disease from powerful machinery assisting the labour of man, and from mining operations, there existed only one such charity, opened in the year 1779, when the population of Birmingham did not exceed 50,000; and he generously contributed £100 towards the building fund, at the same time accepting the office of Honorary Physician, which he continued to hold until the time of his death. On the incorporation of Queen's College, the doctor was appointed the first Principal.

To a highly-cultivated mind, and, as we have stated, eminent professional qualifications, Dr. Johnstone united a benevolence of heart, and a peculiar kindness and urbanity of manner, which endeared him to his patients and professional brethren, and won for him the esteem and respect of all classes.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 11th September, 1851:—Thomas Wynne Williams, Denbigh—Henry Lowndes, Liverpool—William Notly, Manchester—George Earle, Beverley—Henry Folkard, Old Brompton.

CASE OF OVARIAN PREGNANCY OF TWELVE YEARS' DURATION, WITH A PERFECTLY MATURE FÆTUS. BY DR. KIWISCH, OF ROTTERDAM.

THE author of this contribution to pathology stated that the preparation which he then exhibited to the Würzburg Society had been removed from the body of a woman, thirty-four years of age, who had died in convulsions with Bright's disease of the kidneys. She had borne twins at an early age; and, upwards of eleven years since, the signs of a new pregnancy were so distinct that an accoucheur had been engaged. About the seventh month she suffered from severe uterine hæmorrhage; but, as neither then nor afterwards did labour occur, it was supposed, notwithstanding that foetal movements were felt, that the diagnosis of pregnancy had been erroneous, and the patient was henceforth treated as the subject of an abdominal tumour. It is very remarkable that neither during the development nor after the death of the ovum were any symptoms of disordered health known to have occurred. At the period of the greatest development of the foetus the circumference of the abdomen was always less than is usual, and in the last year of her life it very much decreased. On examining the body, the tumour was found partly covered by the intestines but not adherent to them, lying somewhat to the right side, and, being connected with the uterus by the broad ligament, it had the appearance of an enlarged ovary lying freely on the brim of the pelvis. The tumour, when removed entire from the pelvis, presented the following characters:—

Its size was about that of the head of a child of two years of age; it was perfectly round, and was covered with a white shining membrane, which might have been mistaken for peritoneum, and was on the one side continuous with the broad ligament. On its upper surface was the hypertrophied and flattened Fallopian tube. The fimbriated extremity of the tube was so intimately united to the outer covering of the tumour that it could not be traced, and therefore its abdominal aperture could not be discovered; neither could any communication be traced between the tube and the cavity of the tumour. The upper part of the coats of the tumour were very thin, and at this part presented a small bunch of what proved to be finger-bones protruding through the membrane. The tumour was covered by a smooth, firm, continuous tissue, of the consistence and hardness of a fibrous membrane. In like manner, diverticula of the peritoneum were found, which contained the feet. On the under surface of the tumour was a substance about two inches in length and

about three lines in thickness, which was evidently the altered remains of the ovary. This body was examined by Drs. Kiwisch and Kölliker; it presented, however, no trace of structure by which its true nature could be determined.

On opening the tumour, the inner surface of the membrane was found firmly adherent and incorporated with the parts, with which it was in contact, of a compressed foetus,—*e. g.*, with the right parietal and temporal bones, and with the bones of the foot and hand, which lay most externally. On the surface at other parts the membrane was raised, as if in blisters, by a fatty unctuous substance which intervened between the foetus and the tunics of the cyst. Those portions of the foetal bones which were further removed from the external coats of the tumour were covered by their own integuments and soft parts: this was seen to be the case with the other portions of the scalp, neck, and upper and lower extremities; but it was impossible to ascertain the condition of its surface generally, without entirely destroying the preparation, so completely was it folded and compressed upon itself in every direction; and so disfigured was it by this compression, that it was difficult to recognise anything like features. The integuments of the scalp presented fully formed hair, and the size of the several bones of the skull and of the extremities left no doubt that they belonged to a mature foetus. On the inner surface of the sac were also to be perceived the remains of a placenta, about the size of a small plate, having on its internal aspect some traces of amnion and umbilical cord.

The uterus was distinctly hypertrophied, particularly in the direction of its length, which was augmented at least to the amount of one-third. The other tube was united by adhesions to the ovary and uterus.

Dr. Kiwisch observes, with regard to this case, that if this cannot on anatomical grounds be shown to have been an ovarian pregnancy, still more are physiological opinions adverse to the supposition of development occurring within an ovarian cyst; inasmuch as late experiments appear to have shown that the rupture of a cell is necessary to the impregnation of the ovum by the immediate contact of the spermatozoa.

The rupture of the Graafian follicle was attributed to pressure exerted upon the ovary by adjacent organs, and not to any independent power existing in these organs. This pressure may be unequally exerted, and the minute ovum in that way retained after the fluid has been discharged. This explanation is applied by the author to the

case now related, which shows the Graafian follicle to be sufficiently vascular to supply nourishment to an ovum in the course of development.—*Verhandlungen der Physikalisch-Medicinischen Gesellschaft in Würzburg*, 1851.

X

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 30.30

" " " Thermometer^a 57.1

Self-registering do.^b Max. 0.0 Min. 33.

^a From 12 observations daily. ^b Sun.

RAIN, in inches, 0.0. — Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was about that of the monthly average.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Sept. 13.

| BIRTHS. | | DEATHS. | |
|-----------|------|-----------|------|
| Males.... | 734 | Males.... | 535 |
| Females.. | 695 | Females.. | 491 |
| | 1429 | | 1026 |

CAUSES OF DEATH.

| | |
|--|------|
| ALL CAUSES | 1026 |
| SPECIFIED CAUSES | 1022 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 290 |
| <i>Sporadic Diseases, viz.—</i> | |
| 1. Dropsy, Cancer, &c. | 58 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 108 |
| 4. Heart and Bloodvessels..... | 34 |
| 5. Lungs and organs of Respiration | 82 |
| 6. Stomach, Liver, &c. | 68 |
| 7. Diseases of the Kidneys, &c. | 9 |
| 8. Childbirth, Diseases of Uterus, &c. | 6 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 7 |
| 10. Skin..... | 1 |
| 11. Premature Birth | 28 |
| 12. Old Age | 44 |
| 13. Sudden Deaths..... | 13 |
| 14. Violence, Privation, Cold, &c.... | 63 |

The following is a selection of the numbers of Deaths from the most important special causes:

| | | | |
|--------------------|-----|------------------|-----|
| Small-pox..... | 22 | Convulsions..... | 32 |
| Measles..... | 14 | Bronchitis | 89 |
| Scarlatina | 27 | Pneumonia | 25 |
| Hooping-cough | 18 | Phthisis | 136 |
| Diarrhoea..... | 101 | Lungs | 7 |
| Cholera..... | 17 | Teething | 11 |
| Typhus..... | 57 | Stomach | 6 |
| Dropsy | 19 | Liver..... | 13 |
| Hydrocephalus | 16 | Childbirth | 5 |
| Apoplexy | 20 | Uterus | 1 |
| Paralysis | 21 | | |

REMARKS.—The total number of deaths was 78 above the average mortality of the 37th week of ten previous years.

NOTICES TO CORRESPONDENTS.

We have to inform Mr. Smale, of Boston, that we know nothing of the paper or of the wood blocks to which he refers. We remember seeing the engravings in a contemporary journal about the date mentioned. The notice of the meeting of the Crewkerne Medical Association has been received. Mr. N. F. Davey's letter shall be inserted in the following number.

LONDON HOSPITAL MEDICAL SCHOOL.—The Lectures will commence on Wednesday, Oct. 1, 1851, when an Introductory Address will be delivered by Dr. Fraser, at Half-past Two, P.M.

WINTER SESSION.

Medicine—Dr. Little.
Surgery—Mr. Curling, F.R.S., and Mr. Critchett.
Descriptive and Surgical Anatomy—Mr. Adams.
General Anatomy & Physiology—Dr. Carpenter, F.R.S.
Practical Anatomy—Mr. N. Ward.
Chemistry—Dr. Letheby.
Dental Surgery—Mr. Barrett.

SUMMER SESSION.

Midwifery—Dr. Ramsbotham.
Materia Medica—Dr. Davies.
Forensic Medicine—Dr. Ramsbotham and Dr. Letheby.
Botany—Mr. Bentley.
Practical Chemistry—Dr. Letheby.

General Fee to the Lectures, £50; to the Hospital Practice and Lectures, 84 Guineas, payable in two instalments of 42 Guineas each, at the commencement of the two first winter sessions.

Applications by post to be made to the Honorary Secretary,

ST. BARTHOLOMEW'S HOSPITAL and MEDICAL COLLEGE.

The Winter Session will commence on Wednesday, the 1st of October, with an Introductory Address by Mr. Skey, at 7 o'clock, P.M.

LECTURES.

Medicine—Dr. Burrows.
Surgery—Mr. Lawrence.
Descriptive Anatomy—Mr. Skey.
Physiology and Morbid Anatomy—Mr. Paget.
Superintendence of Dissections—Mr. Holden and Mr. Coote.
Demonstrations of Morbid Anatomy—Dr. Kirkes.
Chemistry—Mr. Stenhouse.

SUMMER SESSION, 1852, commencing May 1st.

Materia Medica—Dr. Roupell.
Botany—Dr. F. J. Farre.
Forensic Medicine—Dr. Baly.
Midwifery, &c.—Dr. West.
Comparative Anatomy—Mr. M'Whinnie.
Practical Chemistry—Mr. Stenhouse.

Hospital Practice.—The Hospital contains 580 Beds, and relief is afforded to 80,000 Patients annually. The In-patients are visited daily by the Physicians and Surgeons; and Clinical Lectures are delivered weekly: those on the Medical Cases, by Dr. Roupell and Dr. Burrows; those on the Surgical Cases, by Mr. Lawrence, Mr. Stanley, and Mr. Lloyd. The Out-patients are attended daily by the Assistant-Physicians and Assistant-Surgeons.

Collegiate Establishment.—Warden, Mr. Paget. Students can reside within the Hospital walls, subject to the rules of the Collegiate system, established under the direction of the Treasurer and a Committee of Governors of the Hospital. Some of the Teachers and other Gentlemen connected with the Hospital also receive Students to reside with them.

Scholarships, Prizes, &c.—At the end of the Winter Session, Examinations will be held for a Scholarship, of the value of £45 a year, and tenable for two years; and for one of £50 for one year. The Examinations of the Classes for Prizes and Certificates of Merit will take place at the same time.

Further information may be obtained from the Medical or Surgical Officers or Lecturers, or at the Anatomical Museum or Library.

KING'S COLLEGE, LONDON.—MEDICAL DEPARTMENT.—The WINTER SESSION, 1851-2, will commence on Wednesday, October 1, 1851, on which day all Students are expected to attend the Introductory Lecture, by Professor William Bowman, F.R.S., at Two o'clock.

The following Courses of Lectures will be given during the Session:—

Anatomy, Descriptive and Surgical—Professor Richard Partridge, F.R.S.; Demonstrators, Henry Lee, F.R.C.S., Henry Hyde Salter, M.B., and John Wood.
Physiology and General Morbid Anatomy—Professors R. B. Todd, M.D., F.R.S., and W. Bowman, F.R.S.
Chemistry, Theoretical and Practical—Professors W. A. Miller, M.D., F.R.S., and John Bowman, Esq.; Demonstrator, T. F. Hardwich.
Principles and Practice of Medicine—Professor George Budd, M.D., F.R.S.
Principles and Practice of Surgery—Professor William Fergusson, F.R.S.

KING'S COLLEGE HOSPITAL.

The Hospital is visited daily.

Clinical Lectures are given every week, both by the Physicians and by the Surgeons.

The Physicians' Assistants and Clinical Clerks, the House Surgeons and Dressers, are selected by examination from the Students of the Hospital.

One Scholarship of £40, tenable for three years; one of £30, and three of £20 each, tenable for two years, will be filled up in April next.

Full particulars on every subject may be obtained from Professor Guy, M.D., Dean of the Department; or upon application to J. W. Cunningham, Esq., Secretary.

R. W. JELF, D.D., Principal.

August 1, 1851.

ST. THOMAS'S HOSPITAL COLLEGE of MEDICINE and SURGERY.—The next Session commences on Wednesday, the 1st of October, 1851, when an Introductory Address will be delivered by Dr. Leeson, at 8 o'clock, P.M.

Consulting Physician, Dr. Roots. Physicians, Dr. Barker, Dr. Leeson, Dr. Bennett. Surgeons, Mr. Green, Mr. South, Mr. Mackmurdo. Assistant Physicians, Dr. Goolden, Dr. Cohen, Dr. Peacock. Assistant Surgeons, Mr. Solly, Mr. Le Gros Clark, Mr. Dixon. Midwifery Department—Physician, Dr. Waller.

Lecturers:—Medicine, Dr. Barker. Exanthemata, Dr. Gregory. Surgery, Mr. Green, Mr. South. Physiology, Mr. Grainger. Descriptive and Surgical Anatomy, Mr. Le Gros Clark. Chemistry, Dr. Leeson, Dr. Gladstone. Anatomical Demonstrations, Mr. Rainey, Mr. Bristowe. The Teeth, Mr. Saunders. Ophthalmic Surgery, Mr. Mackmurdo. Comparative Anatomy, Dr. Meryon. Medical Jurisprudence, Dr. Barker. Materia Medica, Dr. Bennett. Midwifery, Dr. Waller. Botany, Mr. Bristowe. General Pathology, Mr. Simon. Clinical Medicine, Physicians and Surgeons.

Scholarships, Prizes, and Hospital Appointments are awarded to meritorious Students.

The admission fee to Hospital Practice and all the Lectures, is £40 for the first year, £40 for the second year, and £10 for the third. Special entries to Hospital Practice, or to any particular course of lectures, may be made.

For detailed Prospectus and further information apply to the Dean, or to R. G. Whitfield, Medical Secretary, who is authorised to enter Students.

H. B. LEESON, M.D., F.R.S., Dean,
R. G. WHITFIELD, Med. Sec.

SAINT GEORGE'S HOSPITAL MEDICAL SCHOOL, LONDON.

The Session 1851-52 will commence on Wednesday, October 1st, when the Scholarships and Prizes awarded during the past year will be presented.

Gentlemen becoming Pupils of this Hospital may attend the Medical and Surgical Practice necessary for those who desire to become Members of the Royal College of Surgeons, or Licentiates of the Society of Apothecaries, and all the Lectures, on paying 40 Guineas at the commencement of the first year, 40 Guineas at the commencement of the second year, and 12 Guineas at the commencement of the third year. The payment for the year will admit the Pupil to all the Lectures, and to the Hospital Practice required, and for that year only.

Special entries to Hospital Practice, or to any separate Course of Lectures, may be made as heretofore.

Clinical Lectures on Medicine and Surgery are given by the Physicians and Surgeons of the Hospital, during the Winter and Summer Sessions.

Practical Chemistry is taught in the Laboratory of the School.

Practical Pharmacy under the superintendence of the Apothecary of the Hospital.

The SUMMER SESSION will commence May 1st.

SCHOLARSHIPS, PRIZES, &c.

At the end of the Summer Session, Examinations will be held for three Scholarships, of the value respectively of £20 per annum, each tenable for two years.

Examinations of all the Classes for Prizes and Certificates of Merit also take place, and Prizes given by Sir Benjamin Brodie and Dr. Chambers are awarded.

ASSISTANT-SURGEONCY IN THE HON. EAST INDIA COMPANY'S SERVICE.—A nomination to the appointment of an Assistant-Surgeon in the Hon. East India Company's Service has been placed at the disposal of the Governors of the Hospital by the liberality of Ross D. Mangles, Esq., M.P.

This appointment will be offered as a Prize to the Pupil of the Hospital School, who, entering in October, 1851, shall be most distinguished for his general good conduct, talent, and proficiency in 1854.

THE THOMPSON MEDAL will be awarded for the best Clinical Report of Medical and Surgical Cases observed in the Hospital during the preceding twelve months.

CURATOR OF THE PATHOLOGICAL MUSEUM.—A Curator is appointed annually by the Weekly Board, on the recommendation of the Medical School Council, with a salary of £50 per annum.

REGISTRARS.—Two Registrars are appointed annually by the Weekly Board, on the recommendation of the Medical School Council, each with a salary of £20 per annum.

Some of the Lecturers and other gentlemen connected with the Hospital receive Students to reside with them.

Further information may be obtained from any of the Lecturers; or from the Apothecary of the Hospital, who is authorised to enter the names of Students.

UNIVERSITY COLLEGE, LONDON.—FACULTY OF MEDICINE.

The Classes will commence on Wednesday, October 1st, when Dr. Parkes, Professor of Clinical Medicine, will deliver an Introductory Lecture at 8 o'clock, P.M.

A Soirée will be held after the Lecture in the Library, which the friends of the College are invited to attend.

THOMAS GRAHAM, Dean of the Faculty.

CHAS. C. ATKINSON, Sec. to the Council.

Sept. 8, 1851.

HUNTERIAN SCHOOL of MEDICINE, 1, Bedford Street, Bedford Square. Established in 1822, by the late Mr. Dermott.

The Winter Session will commence October 1, with an Introductory Address by Dr. Robert Barnes, at 3 P.M.

Medicine—Dr. Aldis, F.R.C.P.

Surgery—Mr. Evans Riadore.

Anatomy and Physiology—Mr. J. Chippendale, F.R.C.S.

Practical Anatomy—Mr. E. J. Chance, F.R.C.S.

Assistant-Demonstrator—Mr. Thomas Smith.

Chemistry—Mr. J. M. Ashley.

The Summer Courses will be delivered by the present Lecturers.

For all the Lectures required by the College of Surgeons and Apothecaries' Hall, Thirty-three Guineas; including Hospital Practice, Fifty-eight Guineas.

Apply to Dr. Aldis, 1, Chester Terrace, Chester Square; or 28, Bedford Square.

WESTMINSTER HOSPITAL SCHOOL OF MEDICINE—Session 1851-52:

The Lectures will commence on Wednesday, 1st October, with an Introductory Address by Mr. Holthouse.

Anatomy and Physiology—Mr. Hillman and Mr. Brooke, F.R.S.

Descriptive and Surgical Anatomy—Mr. Holthouse.

Anatomical Demonstrations—Mr. Burford Norman.

Chemistry—Mr. Lewis, M.A.

Medicine—Dr. Hamilton Roe and Dr. Basham.

Surgery—Mr. Phillips, F.R.S. and Mr. Holt.

Midwifery and Diseases of Women—Dr. Frederic Bird.

Materia Medica—Dr. Basham.

Forensic Medicine—Dr. Fincham and Dr. Tanner.

Botany—Dr. Radcliffe.

Dental Surgery—Mr. Clendon.

HOSPITAL PRACTICE daily, from Half-past 12 to 2 o'clock.

CLINICAL LECTURES will be delivered regularly, twice a week, by the Physicians and Surgeons. Those on Midwifery by Dr. Merriman and Mr. Greenhalgh.

General Fee to the Lectures required by the College and Hall, Forty Guineas.

A Matriculation Scholarship will be instituted, the holder of which will be admitted without fee to the Lectures and Hospital Practice required by the College of Surgeons and the Society of Apothecaries. The Examination for this Scholarship will be held on Friday, October 3. A Scholarship of the annual value of £20, tenable for three years, will be vacant in 1854, and will be awarded to the Student who shall most distinguish himself in a general examination. Further particulars may be obtained on application to the Lecturers, or to

F. J. WILSON,

Secretary to the Westminster Hospital.

A COLLECTION OF FACTS ILLUSTRATIVE OF
 THE

MORBID CONDITIONS OF THE
 PULMONARY ARTERY,

AS BEARING UPON THE TREATMENT OF
 CARDIAC AND PULMONARY DISEASES.

BY NORMAN CHEVERS, M.D.,
 Civil Assistant Surgeon, Chittagong, Bengal.

[Concluded from page 487.]

*Prognosis in Cases of Cyanosis, &c. in-
 volving a Faulty Condition of the Pulmo-
 nary Artery.*

SOME leading data for prognosis in cases of
 congenital cardiac defect may be drawn
 from the earlier remarks in the chapter on
 Diagnosis. Thus it will be found that,
 in cases of "*distribution of the descending
 aorta from the pulmonary artery*," death
 occurs within the first year. In *transpo-
 sition of the great arteries* (unattended
 with general transposition of the viscera),
 life has not been known to be protracted
 beyond the fourth year, while death usually
 occurs much earlier. The highest age which
 is known to have been attained in *imper-
 foration of the ascending pulmonary artery*
 is 16 years; but here, also, life is rarely so
 protracted. I can only discover five cases
 of this lesion in which the individuals sur-
 vived the age of a year and a half.*

The subjoined analysis of 159 cases of
 congenital organic defect of the heart, or
 cyanosis (from Dr. Aberle, of Vienna),
 affords a fair ratio of the probability of
 survival under these circumstances:—

| | |
|-------------------------------------|----------|
| Death, in the first 24 hours . . . | 4 cases. |
| „ in the first fortnight . . . | 16 „ |
| „ before the end of 1st month . . . | 7 „ |
| „ second to third month . . . | 6 „ |
| „ third to sixth | 8 „ |
| „ sixth months to one year . . . | 12 „ |
| „ one year to two years . . . | 7 „ |
| „ two years to three | 9 „ |
| „ three years to six | 11 „ |
| „ six to eight | 11 „ |
| „ eight to eleven | 13 „ |
| „ thirteen to sixteen | 12 „ |
| „ sixteen to twenty | 8 „ |
| „ twenty to twenty-five . . . | 10 „ |
| „ twenty-five to thirty . . . | 6 „ |
| „ thirty to thirty-five . . . | 5 „ |
| „ thirty-five to forty-five . . . | 5 „ |
| „ forty-five to sixty | 4 „ |
| „ at eighty | 1 „ |
| | 159 |

* In 26 cases of obliteration of the orifice or
 ascending portion of the pulmonary artery, col-
 XLVIII.—1243. Sept. 26, 1851.

We find here, that, previous to the expi-
 ration of the first year of existence, 57, or
 35 per cent., of the cases proved fatal Up-
 wards of two-thirds (108) of the indivi-
 duals died before the age of eleven years;
 between that age and twenty-five years 30
 more had fallen from the list; and, of the
 remaining 21, five only passed the age of
 45 years.

Every epoch of the brief life of an indi-
 vidual suffering from a grave congenital
 defect is fraught with danger to the patient,
 and with the deepest anxiety to his physi-
 cian. The commencement of respiration
 is attended with imminent danger of fatal
 embarrassment to the circulation, the heart
 now becoming suddenly burthened with
 functions which it is destined never to
 perform with freedom; and, at the period
 when the closure of the arterial duct and
 foramen ovale should be effected, the
 struggle for existence becomes still more
 protracted, and equally precarious. The
 third period of danger is proved to attend
 the first dentition. Hooping-cough, scar-
 latina, and measles, fall with double weight
 and fatality upon these unfortunate little
 patients. Another season of trial is ushered
 in by the approach of the second period of
 dentition; while, in any year of childhood,
 death may occur from hydrocephalus,
 bronchitis, pneumonia, pulmonary tuber-
 cular disease, diarrhoea, or gradual aggra-
 vation of those agonising paroxysms which
 characterise the disease. Thus it will be
 perceived to be indeed a matter of almost
 hopeless difficulty for a cyanosed child to
 struggle on to the age of puberty; but
 that life should be extended beyond the
 period at which that change is effected, is
 an anticipation which can scarcely be
 entertained, even by the most sanguine.

The unfortunate little subject of these
 defects is, in almost every instance, unable
 to take part in those active and clamorous
 sports which the young child in vigorous
 health instinctively pursues, for the deve-
 lopment of his respiratory organs and
 muscular system. Hence, as the period of
 maturity approaches, when the other
 organs of his body have acquired nearly
 their due bulk and proportion, and when,
 as the result of habitual inactivity, a pre-
 ponderance of fluids almost invariably
 exists, the narrow and ill-formed chest and
 deficient pulmonary apparatus present
 causes of nearly inevitably fatal obstruc-

lected in this memoir, death occurred at the
 following ages:—Still-born (1); 7 days (1); 13
 days (1); 23 days (1); uncertain, but under 1
 month (4); 4 weeks (1); 6 weeks (1); 7 w eks
 (1); 5 months (1); 5½ months (1); under 6 months
 (1); six months (1); 8 months (1); 10½ months
 (1); 11½ months (1); 11 months (1); 8 years (1);
 between 9 and 10 years (1); 10 years (1); un-
 known (1); 16 years (1).

tion to the circulation through the imperfect and relatively feeble heart.*

The observations of Farre and others lead to the belief that corresponding cardiac defects are liable to occur in several children of the same parents. Several children of one family may be born with various cardiac defects; or several children may be born still, and one with cardiac malformation. Our evidence upon this subject, however, is extremely scanty.

Oceasionally, malformation of the heart may have caused the death of the fœtus in utero. Dr. Hunter argued that many miscarriages at the earlier or later months may depend upon some undiscovered malformation, perhaps of this kind.

In those females suffering from severe congenital disease of the heart who survive the age of puberty, menstruation usually occurs late. Whether women thus circumstanced have ever become the mothers of healthy children subsequently to the establishment of that function, I have not been able to ascertain: in fact, the marriage of such persons must be an extremely rare occurrence. Great cardiac obstruction appears almost equally to determine the late development of puberty in the male. In all the slighter forms of congenital cardiac defect, occurring in patients of either sex, it is probable that the offspring does not suffer in any evident degree. In a case of great contraction of the pulmonary orifice which I have quoted from M. Cherrier, it is mentioned that the man married at the age of 28 years, and had two children, who died of scrofulous affections at the age of three years. This, however, may have been merely an accidental coincidence. It is to be regretted that our information upon this subject also is so extremely scanty. A few additional facts would be of very high physiological interest.

Persons who are the subjects of congenital obstructive disease of the heart are always liable to suffer from temporary or organic cerebral lesions, consequent either

upon deficient supply of blood to the brain, the circulation of an ill depurated fluid through the vessels of that organ, or mechanical obstacle to the emptying of its veins. Most of the leading symptoms in these cases are cerebral—drowsiness, torpor, giddiness, vertigo, headache, loss of consciousness, syncope, &c. After the first months of infancy a large proportion of deaths in cyanosis result from various kinds of cerebral disease; such as watery softening, hydrocephalus, abscess of the brain, congestion, or other grave lesions of the nervous centres, producing convulsions and convulsive attacks, hemiplegia, and temporary or permanent paraplegia.

The rule, in cases of cyanosis, is that the intellect is deficient, mainly from a faulty condition of the brain, and partly also, no doubt, from the want of mental training which is usually, and almost necessarily, attendant upon prolonged ill health in childhood and early youth. The recorded instances of ordinary or precocious development of intellect in these subjects are extremely rare, and might, probably, be found to have been placed on record chiefly upon the authority of partial friends. The development of the intellectual faculties, however, is not, as some writers have argued, proportioned in these cases to the degree in which the heart is malformed, but to the degree in which the blood is arterialised, and to the quantity of that fluid which is supplied to the brain.

These patients rarely perish from the gradual symptoms which usually characterise obstructive disease of the heart. They are liable to die suddenly from failure of the heart's action, or to sink rapidly when bronchitis, or pneumonia, or any other cause tending to embarrass the lungs, comes into operation; but they are not affected with dropsy (except in those cases where cyanosis occurs comparatively late in life, as the result of lesions superadded to congenital malformation), and œdema very rarely presents itself as one of the earliest (noticed) symptoms, as is often the case in ordinary heart-disease. In congenital cyanosis, the venous system seems to adapt itself to the overloading, from delay, which it constantly experiences; the right auricle, cavæ, and entire venous system, appear to have been of unusual capacity from the first, and the veins of the liver especially are capable of containing a vast quantity of delayed blood. Hence there is a less tendency to the occurrence of dropsical exudations here than in cases where obstruction to the circulation commences at a later period of life. Although dropsical effusions rarely proceed to extremity in cases of this kind, their development, where they do occur, must be re-

* Persons with very slight and apparently uninjurious congenital defects in the heart and its appendages, rarely survive the period of greatest muscular strength (25 years). Under such circumstances, the heart is peculiarly susceptible of acquired disease, and the lungs are extremely liable to sudden and extensive inflammations. It is extremely rarely that we meet with any congenital defect of the heart (except valvular foramen ovale and corded sigmoid valves) in a person advanced in life. For particulars regarding the influence of deficient thoracic development in producing dangerous impediment to the circulation through the right side of the heart, in cases where that organ is not malformed, see Dr. Barlow's valuable paper in the 7th volume of the Guy's Hospital Reports, as well as some observations by the author in the same volume.

garded as an evidence of the most excessive and serious degree of obstruction. Œdema of the legs and feet is apt to appear in the advanced stages of morbus cæruleus, and is liable to be attended with gangrene,—less on account of extensive distension, than owing to sluggishness of the circulation in parts remote from the heart.

The lungs, mesenteric glands, and other internal organs of persons suffering from cyanosis, are extremely liable to become the seats of tubercular deposit. This is accounted for by the supposition of an authority, whose name has escaped me, that it depends upon the deficient and imperfect supply of arterial blood to the parts.

It is singular that so able an observer as Rokitsansky should have failed to notice this very ancient and well-supported fact. He observes, "All forms of cyanosis, or rather all the diseases of the heart, great vessels, and lungs, adapted to produce cyanosis in a greater or less degree, cannot co-exist with *tuberculosis*. Cyanosis affords a complete protection against it, &c."*

Many of the cases of cyanosis adduced in the earlier portions of this memoir wholly negative the opinion of Rokitsansky, and prove that, on the contrary, the subjects of congenital malformation of the heart are rather excessively prone to suffer from tuberculosis at all ages, but especially where life is somewhat unusually prolonged.†

* As quoted by Dr. Stillé, Philadelphia Med. Examiner, April 1849, and Ranking's Retrospect, vol. x., from Hundbuch der Path. Anat. Bd. ii. p. 510.

† See Dr. Ramsbotham's case of obliteration of the pulmonary artery: death at the age of sixteen years from tubercular disease. Dr. Shearman, imperforate pulmonary orifice in a girl, ætat. 8 years. Lungs found very full of grey tubercle. Dr. Cheever, marked contraction of the pulmonary orifice in a boy aged 13½ years; cyanosis from the first months of infancy. Tubercles were found pretty generally diffused through the substance of the lungs. M. Schuler, cyanosis: death at seven weeks; scrofulous degeneration of the mesenteric glands. Mr. Houston, contraction of the pulmonary artery, with cyanosis; death from phthisis and bronchitis at the age of 3 years. M. Cuillot, cyanosis from birth; death at 11 years and 7 months. Lungs condensed, and in an advanced state of phthisical degeneration. M. Lexis, extremely contracted state of the pulmonary artery in a girl 5½ years of age. The pulmonary tissue contained a few tubercles. Mr. Napper, contracted pulmonary artery, with cyanosis, in a child aged 5 years and 10 months. Lungs tubercular. Messrs. Arun and Bennett: a female, ætat. 20.† Great contraction of the pulmonary artery; very aggravated cyanosis; great consolidation of the lungs by tubercles; death from hip-disease and erysipelas consequent upon caries of one of the ribs. Case occurring at Guy's Hospital: lad, ætat. 16; contraction of the pulmonary artery; cyanosis. The right lung contained miliary tubercles; the left was engorged with blood, and contained at its apex a tubercular excavation, apparently of long standing. Dunglison: a female, ætat. 21;

Hæmorrhages from the nose, mucous membrane of the bowels, and lungs, are liable to occur at all periods of the lives of cyanosed patients, but are most frequent towards the close of existence, when congestion is greatest, and the obstruction to the circulation resulting from the advance of structural impairment of the organs is at its height. The lighter forms of hæmorrhage are usually followed by temporary relief; but hæmoptysis, as it involves an extremely severe lesion, and almost invariably results in these cases either from tubercular or pneumonic degeneration of lung-substance, from bronchitis, or from some new and serious impediment to the pulmonary circulation having its seat in the pleuræ, left heart, or systemic vessels, must always be viewed with the utmost apprehension.

Hepatic, splenic, gastric, and enteritic congestions, may be regarded almost as the necessary and physiological attendants upon congenital cardiac obstruction, and are constantly liable to be determined into states of more or less active disease. A foul tongue, offensive breath, imperfect digestion, a general tendency to defective nutrition, bad or capricious appetite, a faulty biliary secretion, with constipated or irregular bowels, are the almost inseparable concomitants of the state under investigation; and hence the danger attendant upon diarrhœal and dysenteric attacks in these patients.

Whenever the urine is found to be albuminous in a case of acute exocardial or endocardial disease, the prognosis is bad, as here it rarely fails to happen that the kidneys are the seat of fixed organic lesion, of which the cardiac mischief is not the cause, but the result. Possibly, though not very probably, patients thus affected may recover for a time, but, as far as I have observed, they most frequently sink under the immediate attack, or only survive it for a very brief period, during which the abatement of symptoms is extremely partial. This arises from the fact that, in acute cardiac and arterial diseases of renal origin, the lesions are generally of the most extensive and the gravest character. In all forms of chronic heart-disease where the urine is albuminous, when the patient is first seen

congenital contraction of the pulmonary artery, with cyanosis. Both lungs studded throughout with crude and miliary tubercles, none of which were softened. Dr. Craigie: a man, ætat. 44; pulmonary valves contracted so as to form a ring, which could only admit the point of the little finger. Both lungs contained tubercles, and were much consolidated: the apex of the left was occupied by a large tubercular cavity. Mr. Le Gros Clarke: case of a man, ætat. 19; great contraction of the pulmonary orifice; cyanosis. The lungs presented tubercles at different parts.

the prognosis is invariably bad, especially where the duration of the renal affection is not known; and so long as this symptom resists judiciously-employed treatment, the patient's condition must be regarded as very critical. The sudden appearance of albumen in the urine of an individual suffering from organic heart-disease, is always a most discouraging symptom; but the practitioner should not on that account neglect to employ systematic endeavours to relieve its cause, as it may depend upon little more than excessive congestion of the kidneys, which may, not improbably, be removed, when the bulk of the circulating fluid, or of any aseptic effusion which may be present, has become diminished, or when the renal functions have become lightened by moderate excitation of the cutaneous and intestinal actions.

The secretion of scanty and high-coloured urine, as evidencing renal congestion, is a frequent characteristic of cyanosis; true Bright's disease is, I believe, only noticed in these cases as a very rare and accidental complication. The subjects of cyanosis could scarcely live through those vicissitudes or excesses which occasion the commoner forms of mottling and granular disease of the kidney. Hence, whenever failure of the renal function, or an albuminous state of the urine, occurs in these cases, it must be viewed with much apprehension, as indicating the superaddition of more or less severe structural alteration in organs which have never performed their functions with healthy freedom. It is here that the most delicate discrimination of the pathologist, and the nicest judgment of the therapist, must combine in an endeavour to relieve the weak and overloaded heart, to remove bronchitis, that the pulmonary transpiration may be rendered as free as possible, to increase the action of the skin, to exclude from the diet and medicine everything that may act directly or indirectly as an excitant to the suffering organs; and, in short, so carefully to free the kidneys from all excessive duty and additional causes of irritation, that the congestion may have a tendency gradually to subside, and to leave the organs capable of performing a moderate function with comparative ease.

In concluding this perhaps unduly lengthened memoir on diseases of the pulmonary artery, I should feel that I owed an apology to those who may have done me the honour to accompany me throughout my investigation, did I not believe that I have rendered some service to medicine in proving that a class of diseases which has hitherto been considered of such unfrequent occurrence, so barren of interest, and so destitute of importance, as scarcely to de-

serve a separate place, or even more than a passing notice, in systematic works, will, upon being observed with proper attention, reveal a series of physiological and pathological facts of the highest interest, and a set of therapeutic indications of no trivial moment.*

Chittagong, Bengal, November 1st, 1850.

CONGENITAL VARIOLA IN TWINS. BY
JAMES AYRE, M.D., BOSTON.

I WAS called, in haste, last week, to Mrs. P., and found her lying on the bed, in great pain. On examination, the head of a small foetus was found born. The uterine contractions were active, and its full delivery effected in a moment, attended by a feeble cry. The pains continued, a bag of fluid was felt protruding, and soon a second foetus was expelled dead. Two separate placentæ were afterwards removed, and the patient made comfortable. The infants were found of the size and development of six months. The living one had a dozen or more of pustules on the face, head, and breast; one or two were noticed on the abdomen, but none on the limbs. Three or four were good-sized, plump and well-defined pustules of small-pox. The remainder were not so full, but evidently of the same character. This one survived its birth two hours. The dead child had no offensive odour; the abdomen was dark purple, and the cuticle quite loose. Its whole body, especially the abdomen, was marked with depressions, similar to those of variola in infants, after death. No elevations or pustules were noticed; these marks only remained.

Three weeks before the abortion, the mother, I was informed, had broken out with varioloid, after the usual premonitory symptoms, and had just recovered when I saw her. The disease was so mild that a physician was not called. She could not trace her miscarriage to any over exertion, or any cause, except the attack of varioloid. Whether the mother infected the two at the same period, and the death of one caused the expulsion of both; or one had the disease first, and the second received it from him, are questions of some interest, but difficult, from the evidence, to decide.—*Boston Medical Journal* for July, 1851.

* It was originally my intention to have concluded these observations with a concise abstract of views relative to the treatment of cardiac diseases. Finding, however, that my remarks extended themselves beyond the due limits of this already very lengthened paper. I have embodied them in a separate treatise—"On the Management of Diseases of the Heart, and of Aortic Aneurism"—which is now publishing in Calcutta, and which, I trust, will shortly be submitted to the profession at home.

MEDICAL
 SOCIETY

ON THE
 INFLUENCE OF VARIATION OF
 ELECTRIC TENSION,

AS A CAUSE OF DISEASE.

BY W. CRAIG, ESQ.
 Surgeon, Ayr.

[Continued from p. 492.]

BESIDES the particulars enumerated in the previous paper, and occasional influences which operate on a large scale to produce epidemic and severe pestilential diseases, the occurrence of special and individual diseases may be accounted for on the same principle. A very common cause of many complaints is the getting of the vestments wet. A person has been exposed to a shower of rain, and sits inactive till his clothes dry on him. Now, supposing that the individual has just sufficient elimination of vital electricity to supply nervous currents, and none to spare in radiation to change the water in his clothes to vapour, every particle of heat that is abstracted by the evaporating process will be injurious to him. A case where the vital powers begin to wane, as in a person advancing in years, or one worn down by dissipation, in whom the development of heat would be no more than what is just required for vital action, would, on this principle, be injured by being placed in such circumstances. We may suppose a person in an opposite condition of the body exposed to influences of this nature. In this case there is a great amount of bodily vigour, and the vital operations are in the utmost integrity. He engages in an undertaking which requires severe muscular exertion, he continues his labour for some hours together, and, just before he takes his meal, sits down on the grass in a state of perspiration, exposed to a shower of rain, and continues for some time wet. These are circumstances which, on this principle, would be very mischievous. Now what phenomena may be supposed to be developed in a case so circumstanced? For some time after the commencement of the exertion, digestion, assimilation, and respiration would be active; and decomposition going vigorously on during these processes, there

would be a large disengagement of vital electricity, to communicate power to the nervous system for supporting the violent exertion. Supposing the person in possession of a good meal before beginning his labour: digestion and assimilation would continue during the first two or three hours of exertion, but, on the suspension of these processes, the electricity from this source will cease, and there would remain that from respiration alone. Ultimately, in a state of perspiration, and from a sense of exhaustion, he is induced to rest on the grass, and gets wetted with a shower of rain. The respiration now becomes slower; there is consequently less evolution of heat, and still a great demand for it. The evaporation of the perspiration and the rain causes a greatly increased amount of radiation of electricity from the body to produce evaporation, and the ground on which he lies is an excellent conductor, and copiously withdraws the vital electricity in that direction. After exposure for some time to such influences as these, it may follow that the abstraction of vital electricity may have exceeded the point which is essential for the integrity of the vital operations and functions, and the power of the nervous forces may thus be insufficient to elaborate from the blood those secretions and excretions which are indispensable to sound health, the blood thus becoming contaminated with those elements which ought to have been deposited in the body, as well as thrown out of it; thus producing derangements and diseases depending on such changes.

Between the old and infirm, and the young and vigorous, there are many degrees of predisposition and susceptibility to disease, and such individuals will be injuriously affected in proportion to the power of the abstracting agency which may be operating against them. There will be no difficulty, on this principle, in understanding how the susceptible and predisposed are the most ready to suffer from pestilential disease. In diseases and derangements, up to a certain point, of the assimilating and respiratory organs, when those processes are interrupted which contribute vital electricity to the nervous system, it will follow that all the vital actions depending on a definite and proper supply of nervous power will be inadequately and imperfectly performed. Suppose an individual with

just as much nervous power as is necessary to provide the exact amount of vital electricity that is required for the exigencies of his system, and nothing more, exposed to a powerful abstracting influence, such as the copious evaporation of a tropical country; then would the secretions and excretions be imperfectly elaborated from the blood, and thence would arise diseases depending on contamination of the fluids of the body. It is in tropical regions that these causes operate most powerfully, and it is there that pestilential diseases cut down the human family in great numbers.

There is a striking uniformity in the principal characteristics of these diseases. There is the same sudden breaking up of the powers of life—the same tendency to dissolution. However they may vary in their external manifestations, whether yellow or purplish in the skin, or pustulous or carbunculous, involving deeper tissues on the surface, there is a manifest resemblance in the principal characteristics of these diseases. The yellow fever of the African coast, the septic pestilence of Syria and Egypt, and the cholera of all the rest of the world, have in common the same distinction of vital resistance and reduction of the power of cohesion of the tissues.

Whilst local causes may be found to account for the distinctive character of each pestilential disease, yet their general manifestations point to one great operating cause, that must produce them all; and what other element in nature, more than electricity, could possess such an agency, and exert such a power? Electricity is the great binding principle in all inorganic matter; and, on the principle of analogy, it is legitimate to conclude that it acts on organic matter after the same manner, communicating power to the nerves to support the cohesion of the tissues of the living body; and when, by disease, or any other debilitating cause, the power of acquiring electricity—the binding principle is reduced,—and an agency applied to withdraw from the already small stock of electricity, there is thus produced a high state of susceptibility to disease.

The external covering which nature has formed for preserving the warmth of the inferior animals, gives countenance to the views here entertained.

The hair and skin which cover the quadrupeds, the feathers that adorn and protect the fowls, and the skin and cellular substance that surround the body of the human species, are all good non-conductors of electricity. The human being is less carefully protected than the inferior animals, but faculties to acquire knowledge have been bestowed to make him take measures to protect himself. Non-conducting textures have always been selected for clothing, apart from any philosophical considerations, and without reference to the principles here advocated, as they have been found by experience to be most suitable for protection against the effects of cold, and otherwise conducive to the preservation of health. With the same view, the rude nations of the Arctic regions cover their bodies with the dried skins of their native animals, and the civilised denizens of more temperate regions wear fabrics composed of wool, hair, and silk. This last substance is a body of a highly non-conducting power, and is, on this account, a useful material for dress. The barbarous natives of the torrid zone can bear no weighty covering over their ebony shoulders, but they instinctively smear themselves over with grease; and, if this were done effectually, they might be protected from the ravages of many tropical diseases. That this is not mere hypothesis will appear from the following fact:—In the Transactions of the Medical and Physical Society of Bombay, there are given accounts of fever which had prevailed during several years since 1817; and Mr. Gilders, one of the members, remarked, “that during the whole of this havoc the rains were passing down in torrents; and as the villages are mostly situated on rising grounds, or hillocks, while the intermediate spaces were flooded, the whole surface of the country presented the appearance of a sheet of water.” It was stated that at a large establishment where oils were expressed, and where a great number of natives were employed, whose habits were disgustingly filthy, always having their bodies covered over with grease and oil, there was not a single death. Though fever was cutting down hundreds around them, not one of these men fell from it, nor did they suffer at the time from sickness. There must be some connection between the oily skins of these workmen and their immunity from a fever which was cut-

ting down so many at their side: the conclusion is irresistible, that the thick layer of fatty matter which coated their skins prevented the escape of the inbred vital electricity, whilst it was withdrawn from the imperfectly protected surfaces of those who were unconnected with the oil establishment. The water extending on the surface being shallow, would be easily heated, and the consequent copious evaporation would withdraw the electricity in immense volumes from the surface of the earth, and leave it, for the time being, in a highly negative condition; and the equilibrium which is always sought by this element necessarily caused a detraction from the greatly more positive state of those individuals who were in contact with the negative portion of the earth, acted upon by the operation of the evaporation.

Phenomena of an analogous nature may be observed in producing diseases on board vessels at sea. In tropical regions the vessels at sea are often attacked with severe and deadly disease, although far removed from all kinds of miasms and emanations from the soil. The causes which operate in such circumstances must arise from the ship itself, or from the sea which everywhere surrounds it. Nothing but the vapour of pure water can arise from the sea by the operation of heat, and the evaporation can never be so copious as it is from burning land recently covered with rain. In considering the circumstances of the ship itself, we find that it is constructed of wood, and this material is a good non-conductor of electricity, and the crew of the ship are thereby nearly insulated. It is well known that a ship which is kept perfectly dry is much more favourable to health than one which is leaky and always damp. During the operation of washing the deck under the rays of a tropical sun, there is produced, from the great heat of the timber of the deck, a very speedy evaporation. From a conviction that attention to cleanliness is required to prevent sickness on board vessels in hot climates, the masters take care to institute a regular routine of washing and scrubbing. I have heard of vessels which have suffered dreadfully from yellow fever whilst the decks were visited with watery ablutions many times a-day. On the contrary, in those vessels where strict attention is paid to have the ship thoroughly dry throughout, sickness of the people is much more seldom, and

more mild. Various speculations have been entertained to account for the prevalence of fever on board vessels at sea. Some suppose that the vegetable debris, which are sometimes left in the ship in a state of decomposition, emit fomites, and thus produce fever. Dr. Wilson, in his *Memoirs on the Fevers of the West Indies*, supposes that the wood forming the interiors of the holds of the ship undergoes in tropical climates a great change, during which some of its constituent principles suffer decomposition, and pass off in a gaseous form. This change is manifested by the wood becoming dark, by its shrinking and becoming denser in its structure, at the same time losing weight, and by seeming to be partly charred. The extent to which this process is carried, and the nature of its results, Dr. Wilson represents to be modified by the previous condition of the wood, by the great degree of heat, and probably by the interior arrangements of the individual ships. In a vessel newly built, arriving in the West Indies in the hottest season of the year, remaining for weeks in the harbour, with the hold cleared and heated by stoves, as was the case with the "Rattlesnake," the process is speedily completed. According to Dr. Wilson, fever in such circumstances appears early and spreads rapidly, but when it ceases it returns not again. In a vessel, on the contrary, which arrives in the cold season, which is much at sea, and the hold of which is not dried by stoves, the process of decomposition is slow and imperfect, and may never be completed. In such a vessel fever will never be severe and very fatal, but it will recur and produce sickness and death till the last day of her continuance on the station. These facts are confirmed by the phenomena of fever in many vessels in the West Indies.

From a want of confidence in the causes usually assigned as producing sickness on board ship, Dr. W. supposes that, by the decomposition of the walls of the ship, gases are formed, which may act as the mischievous agent. He does not mention, however, what he considers to be the mode of action of these gases on the human body to produce disease. He states that, whilst the drying and heating were being effected, fever appears early and spreads rapidly. There is still the same vagueness as to the mode of operation

of these gases, as has always been associated with what has been understood to be malarious emanations or miasms.* There is an element in this operation of heating and drying of the ship which Dr. Wilson does not take into account, and that is, evaporation. It is not possible to estimate the effects, if any, that could arise to the human frame by the gaseous products of the decomposition of wood; but, on the principles here advanced, an intelligible idea can be well entertained, by supposing that the speedy evaporation of the water imbibed by the timbers of the ship would withdraw from the ship, and consequently from the crew, the vital electricity; and hence would be produced a comparatively negative state of electricity, producing derangements and diseases on the principles here assumed. In the case of the ship dried by stoves, there is a good illustration of what occurs on land. In those places which are naturally dry, but subject to occasional rains, fevers spread rapidly, and are very severe, just while it rains, and more particularly after its cessation, during the evaporation which follows. Now, this suffering is always concomitant with a copious evaporation. The sun acts the part of the stove, and as soon as the earth becomes dry the fever disappears, and continues absent till the next rainy season reproduces the condition favourable for evaporation. Again, in those vessels which are always kept damp by water in the hold and otherwise, "fever will never be severe and very fatal, but it will often recur, and produce sickness and death." This may be viewed as an illustration of what happens on land in warm regions, in the vicinity of marshes. In those localities there are seldom severe and speedily fatal diseases, but almost a constant sickness, in the form of intermittent fever and other complaints. There is here the comparatively slow evaporation, and continued drawing off of the electric fluid from the earth, and the objects on it, which impregnates the clouds; and in this way it may be carried to a great distance, to discharge itself in vivid flashes and terrific thunderings, in a country which may already be well supplied, and thereby be put in a highly positive condition.

As an objection to the general appli-

cation of these principles, it may be held that epidemic diseases prevail to a large extent, and cannot depend on the effects of evaporation, as there is no vapour present. In such circumstances there may be in operation some influences causing epidemic diseases, which depend on the disturbance of the equilibrium and electric tension of the earth, where no conducting influences on the surface are apparent, as must have happened in Glasgow and Paris, as cited above, when cholera last prevailed. The numerous and occult variations which are continually going on in the great terrestrial currents, as indicated by the compass of the mariner, show that operations may be in action, of the most magnificent nature, in the interior of the earth, by this powerful element affecting the surface and disturbing the equilibrium there; causing low tension, and producing irregularities in those situations which may be thus acted on.

As an example of the irregularity and inequality of electric tension, I may cite a curious account of fever that is endemical on the hills of the Southern Peninsula of India. The communication is made, by Dr. Heyne, in the tenth number of the Madras Medical Journal. He states "that the hills where the fever is found to prevail appear, at the first sight, quite harmless. They contain, besides quartz, felspar, and mica, a great proportion of ferruginous hornblende, which, by its disintegration or separation from the rock, becomes highly magnetic, and in which, I suppose, the cause resides which produces the fever, besides a great train of other disorders." "A most remarkable instance illustrative of these facts, and my deductions from them, I found at Zupetoor, which lies in a valley close to a large table-land, the rock of which is sandstone. I asked there a respectable native, whether any such disorders are frequent in the country, and received for answer, 'No, thank God! not within ten miles of this place; but at Tavachymalle, a hilly part, where no man can live two days without getting it.' To this place a Peon was dispatched, with the simple request to bring two or three stones from the rock of the hill, and some sand as may be found on the road. The man returned, and brought pieces of rock composed of felspar, quartz, and plenty of ferruginous hornblende, and the sand of the rock consisted entirely of magnetic sand, and particles of felspar. In that range

* It is a demonstrated fact, that woody fibre, when wetted, abstracts oxygen from the air and produces a large quantity of carbonic acid by what is called *eremacausis*.—ED. GAZ.

of these hills the rocks vary much in their formation; and, wherever the iron granite occurs, the malignant peculiarity is uniformly connected with them. Hornblende in trap contains nearly as much iron as that of the granite; the iron, also, in other minerals, as in the magnetic ore and the carbonated iron ore of that country, possesses as much magnetism in its active state, yet do they not prove themselves in the least hurtful to the constitution."

Dr. Heyne very correctly, in my opinion, attributes the insalubrity of these iron granite hills to the magnetic condition of the rocks composing them, but does not mention the manner in which the magnetism is supposed to act so prejudicially on the human body. The readiness with which the iron granite becomes disintegrated depends, in my opinion, on a want of latent electricity, the binding principle in all matter; and in this way cohesion is disturbed, and the atoms fall asunder. According to the principles here advanced, the unfavourable agency may be produced in the following manner:—The diminished amount of latent electricity in these magnetic minerals may cause them to have a large capacity for absorbing it from every object that may come in contact with them. The animal bodies being always positive, in consequence of continually acquiring latent electricity from the air during respiration, and from the food during digestion, will readily give off their electricity; and if such a quantity be withdrawn as will leave less behind than is necessary for supplying power for supporting the vital operations, there will be produced diseases depending on the imperfectly performed assimilation, secretion, and excretion. There are here none of the usual conditions for creating malarious emanations,—neither decomposing vegetable or animal matter; and moisture seems to protect rather than be injurious, as, whilst the rain is falling, it is observed that the malignant peculiarity is arrested. The ameliorating influence which rain may exercise on the insalubrity of this region may be produced in the following manner:—The electric fluid which is drained from the earth by evaporation will be retained in the clouds; and if not given off in such a concentrated condition as to come forth in the form of lightning, it will come

down to the earth diffused amongst the rain; and this rocky region, which is before in a highly negative condition, will, by the supply thus communicated, become converted into much more positive circumstances, till the electricity is again drawn off by renewed evaporation.

Many other facts might be adduced which give countenance to the principles here advocated; but in the meantime these may suffice.

[To be continued.]

CASE OF DISLOCATION OF THE STERNAL END OF THE CLAVICLE;

(occurring in the practice of Dr. John D. Brown, Strood, Rochester).

REPORTED BY DR. FREDK. J. BROWN.

MR. B., æt. 54, butcher, was riding along the road beneath the banks of Rochester, when his horse came down and fell upon him. His shoulder was thrown against the raised side-path. The accident occurred on the 22d of April, 1850, and Mr. B. was seen on the same day.

The sternal end of the right clavicle was found to be dislocated forwards.

Bracing the shoulders together by the surgeon's hands caused the end of the bone to return to its place; but its retention could not be secured by bandages, nor by an apparatus contrived to keep back the shoulders.

Two or three of the lower true ribs on the right side were fractured, but they caused little inconvenience till the 26th of April. Pneumonia of the right lung supervened on the 1st of May, from which he was convalescent on the 10th.

He returned to Faversham, his usual place of residence, the next day, at which time the clavicle gave him no uneasiness, although there was considerable projection of its sternal extremity, with thickening of the surrounding tissues. Some months subsequently he had completely regained the use of his arm, but he complained of want of power in it when the humerus was raised and extended. The prominence of the clavicle was diminishing.

At the present date there is the same want of power when the arm is elevated, and the projection of the sternal extremity of the clavicle is very evident.

A CASE OF
EPILEPSY,

OCCASIONED BY IRRITATION IN THE
SOCKET OF A TOOTH:

WITH REMARKS.

BY WILLIAM BALLY, M.D. F.R.S.

Physician to the Millbank Prison, and Lecturer
on Forensic Medicine at St. Bartholomew's
Hospital.

(Read before the Abernethian Society,
Jan. 30, 1851.)

THE patient, Thomas Bell, 45 years old, a man of large heavy frame, though not plethoric or fat, and of a somewhat phlegmatic temperament, had been employed for six years and a half as a warder in Millbank Prison, having formerly served in the Royal Artillery force. His habits were temperate, and he had generally enjoyed perfectly good health; his last illness having been ague, from which he suffered while stationed at Woolwich in 1839. He had never been subject to headache, giddiness, fits, or other nervous affection, previous to the attacks presently to be described.

In the month of August 1850, he was sent, in charge of convicts, from Millbank Prison to Shorncliffe Barracks Prison, near Folksetone; and while there—namely, about the end of October—being otherwise in good health, began to suffer from toothache. On the evening of the 4th November, at his request, Mr. Chatfield, the medical officer of the prison, examined the painful tooth, the second upper molar of the right side, but, on account of its very decayed state, and the want of light, declined to remove it then: he applied strong nitric acid, telling the patient to come again the next day. After the acid was applied, the pain ceased, and the patient thought no more of the tooth; but, on the 6th November, he felt a twitching of his right cheek, lasting four or five minutes, and recurring three or four times in the course of the day. At these times, when the twitching had reached a certain degree of intensity, his jaw became locked, and he lost the power of speech; but he had no pain in the head, giddiness, or sense of stupor. The paroxysms of spasm in the muscles of

the right side of the face and jaws recurred during the next day (Nov. 7th), and on the following day, the fourth after the examination of the tooth by Mr. Chatfield, the twitching became more violent, and his jaw locked; he had the sensation of all his teeth on the right side falling out, and then lost consciousness. A strong convulsive fit ensued, which lasted half an hour: the same night he had a second fit. In this attack he was seen by Mr. Chatfield, who describes it as having had all the characters of an epileptic seizure, with more marked distortion of the right than of the left side of the face; the right corner of the mouth being drawn towards the right ear. A third fit of the same kind followed within half an hour after his recovering from the second. In the intervals between the fits, and after the third, he was sensible. A full dose of henbane was given him, and he slept well that night. The next morning Mr. Chatfield, with great difficulty, extracted the tooth, together with a piece of bone, lying between the fangs, and firmly united to them by ossified periosteum.

There was no renewal of the fits during the remainder of the patient's stay at Shorncliffe. On the 19th November he returned to London, and resumed his duties at Millbank Prison. For nearly three weeks he remained well; but on the 7th December, in the middle of the day, he again felt the "twitching" in the right cheek. This subsided on the application of hot cloths: he then became aware of something projecting from the socket of the extracted tooth, and with his finger pulled out a piece of dead bone $\frac{1}{4}$ inch long and 1-6th inch broad, which he preserved. Some "matter," he says, escaped from the socket at the same time. In the course of the afternoon and evening the spasmodic twitching of the face recurred several times, and the jaw became locked each time. He went to bed feeling well; but, at 2 A.M. (December 8th), he awoke with spasm in the cheek, rose to get a towel with which to rub his face, and quickly lost consciousness. His wife was awakened by his falling on the floor in a struggling fit, foaming at the nostrils and mouth. This was followed by a half stupid state, and then by sleep, in the midst of which a second fit of convulsions occurred. At 6 A.M. he was visited

by Mr. Hunt,* of Tachbrook Street, who found him with a flushed face, the veins of his forehead turgid, his mouth apparently drawn slightly to the right side, and his mind confused. While Mr. Hunt was with him, spasmodic twitchings began in the right cheek, visibly extended over that side of the head and neck, and thence to the whole body; the right half of the body being more strongly convulsed than the left. This fit lasted only five minutes. Venesection to the amount of sixteen ounces was performed. On first recovering from the fit he was sensible, but soon fell asleep, and slept several hours. Mr. Hunt gave him a mixture, which contained compound spirit of sulphuric ether and ammonia, directing that a dose should be taken whenever the accession of a fit should threaten.

At 4 o'clock in the afternoon of the 8th I first saw him, at the request of Mr. Hunt. The fits had not returned. He felt weak, and his head heavy, with a dull pain in the forehead, chiefly on the right side. His pulse was of natural volume and frequency, and very soft. His skin and tongue were in a natural state. All symptoms of disordered cerebral function were absent. His jaw was not painful, nor tender on pressure being made over it externally, and at this time it was not particularly examined. Only an aperient of calomel and jalap was ordered, which acted freely the same evening.

The same night, between 10 and 11 o'clock, he suffered a return of the epileptic seizure. He had recovered from it at midnight, when Mr. Hunt saw him, but his mind was still confused; his mouth was more drawn towards the right side than it had been after the previous fit, and he complained of pain in the right ear, behind it, and in the forehead and cheek on the right side. The acetum cantharidis was now applied to the nape of the neck.

I visited him with Mr. Hunt at 4 P.M. on the 9th December. He still complained of pain in the ear and of common headache. The jaw being more closely examined, a large open cavity was found, from which the tooth, and subsequently the piece of bone, had

been drawn. The gum around was slightly tumid, and the alveolar process was felt within the cavity, bare, but apparently not dead. There was a slight puriform discharge from this cavity. Behind it was a much smaller opening in the gum, leading to a stump.

It did not appear advisable to interfere further with the wound in the jaw, since no removable cause of irritation could now be discovered; but, as a measure of precaution, lest the irritation in the upper jaw-bone should induce deeper-seated and more serious mischief, it was agreed that he should take two grains of calomel every six hours. I saw him with Mr. Hunt on the 11th, and again on the 16th December. At the latter date he had lost all uncomfortable feeling in his head, the fits had not returned, and the openings in the gum and alveolar process of the upper jaw were closing; but he was feeble, and suffering from ptyalism; the mercurial pills having, through mistake, been continued longer than was intended. He was now ordered to take quinine, and a nourishing diet. He soon regained his strength, and, in the course of a few days, returned to his duties at Millbank Prison.

He remained quite well until the 22d of February, when he had another fit. This occurred between 8 and 9 o'clock in the morning, while he was on duty, and was preceded for about ten minutes by the usual warning symptoms. He had a return of these symptoms in the course of the next day, but no fit followed. On the 24th or 25th of February his mouth was examined: there was still a small opening in the situation of the socket from which the tooth had been extracted in November; and in the opening a particle of bone, nearly detached, was detected by the finger-nail. This was removed. The opening in the gum soon afterwards closed, and the part has remained sound. Since February he has had no fit or symptom of nervous disturbance of any kind or degree, and at the present time (September 16th) is in perfect health.

REMARKS.—It has long been the received doctrine in medicine that epilepsy, in many instances, depends primarily on some irritation or disturbance in a part of the body distant from the central organs of the nervous system,—in other words, on an eccentric cause

* I have much pleasure in mentioning my obligations to Mr. Hunt and Mr. Chatfield for the knowledge of very many of the particulars of this case, as well as for the kind permission to communicate them to the Abernethian Society.

Yet the records of medicine contain comparatively few clearly detailed cases of epilepsy occurring after the period of childhood in which the dependence of the disease on such eccentric cause was satisfactorily traced. In instances where the presumed local cause consisted in a disordered state of one of the abdominal or pelvic viscera, there has often been room for questioning whether this local visceral disorder and the epileptic seizures really bore to each other the relation of cause and effect; and, where an obviously independent local irritation, such as mechanical injury of a nerve or nervous fibres, has given rise to convulsive affections of muscles, these effects have been more frequently of the nature of tetanus, or local persistent spasm, than of recurring fits of epilepsy; or, if they have possessed the latter character, the circumstances attending them and their symptoms have very rarely been described in detail. This remark applies especially to epilepsy occasioned by irritation of the dental or maxillary branches of the fifth nerve.* The record of a well-marked instance could, therefore, hardly be superfluous or useless. But I have had an additional reason for thinking the foregoing case worthy of admission into the Transactions of the Abernethian Society, in the belief that some of the phenomena it presented may afford a hint for diagnosis in future cases of similar or analogous nature.

The dependence of the epileptic seizures in this instance on irritation of a filament of the dental branch of the superior maxillary nerve can scarcely be doubted. The patient had never suffered from such attacks—nor, indeed, from any nervous ailment—previous to the month of November last, when the irritation about the fangs of the tooth had evidently reached a high degree of intensity; a long intermission followed the extraction of the tooth; the attacks were renewed on two occasions simultaneously with the exfoliation of portions of the alveolar process; and they finally ceased when the socket in the jaw-bone closed, and the gum completely healed over it. Moreover, in each attack, there was this remarkable feature, that the convulsive movements com-

menced in the muscles immediately contiguous to the seat of irritation, and spread thence to the rest of the body. And lastly, there was an absence of all symptoms of disease in the encephalon, or other parts, to which the convulsive seizures could be referred; the headache and drowsiness following one or two of the fits being obviously nothing more than the condition of imperfect coma which so commonly succeeds to an epileptic seizure, in whatever way caused.

Assuming, then, that the attacks were indubitably caused by the irritation in the alveolus of the tooth, the complete development of the epileptic paroxysms, with all their essential characters, seems to me worthy of notice. The general convulsions of the muscles of the body were attended by complete loss of consciousness, and were succeeded by a state of stupor more or less profound; and nearly all the severe attacks which the patient suffered after his return to London occurred, as is so often the case with idiopathic epilepsy, during sleep, when the excitability of the spinal cord is being restored, and when it is no longer subject to the controlling influence of the mind. Several questions of great interest are suggested by such a case as this. Has, for example, the fact yet been well explained, that irritation of a centripetal nerve will excite, in one case, pain in the part supplied by it; in another case, the intense pain of "tic" in a more distant part; and, in a third case, no painful sensation, but only muscular movements? And again, what is the true explanation of the occurrence of coma in epilepsy as a consequence of the irritation of a sensitive nerve-filament? Does Dr. Marshall Hall's theory satisfactorily solve this difficulty? These questions, however, cannot be discussed here.

The feature of the case to which I would more especially direct attention is the complete accordance of the phenomena of reflex movement presented in it with those observed in experiments on decapitated animals, or in paralysed parts of the human body. When, in a decapitated frog or tortoise, a point in the skin of one limb is gently irritated, reflex movements are produced in that limb only—that is to say, in muscles supplied by motor nerves connected with the same part of the spinal cord

* See the cases related or cursorily mentioned by Mr. Tomes (Dental Surgery, pp. 178 and 242); and by Dr. Ashburner (On Dentition, pp. 95 and 98).

to which the sensitive or centripetal nerve conveys the impression from the irritated skin. In proportion as the part is irritated more strongly, the movements extend to other limbs, and at length to the whole body of the animal. In cases of paraplegia in the human subject, too, tickling or otherwise slightly irritating the skin of one foot causes a slight movement of that foot, perhaps only of the toes: if the irritation be stronger, the whole limb is retracted; and, if the irritability of the spinal cord at the same time be great, both limbs will be forcibly drawn up: so, in this case of epilepsy, the first effects of the irritation in the alveolus was spasmodic movement of the muscles of the cheek of the affected side, then of the tongue and jaw; and increase of the influence on the nervous centre was manifested, not merely by the loss of consciousness, but also by extension of the convulsions, first over the side of the head and face, and thence to the whole body; it being still observed, however, that the movements were stronger on the side of the irritation than on the opposite side.

In other recorded cases, where the effects of irritation of a dental filament of the fifth nerve have been more limited, they have been distinctly localised in the muscles of the face and jaw on the same side with the irritating cause, or, beginning in these parts, have extended only to the muscles of the neck and shoulder of the same side, which receive their motor nerves from the nearest part of the spinal cord. Thus, in the fourth volume of the *Medico-Chirurgical Transactions*, there is a case related by Mr. John Mitchell, of Kington, Herefordshire, in which spasmodic twitches, commencing in the left side of the face and tongue, extended, in the more severe paroxysms, to the entire left side of the head and neck, to the left shoulder and arm, and left side of the thorax, and were ultimately relieved by the extraction of several decayed teeth from the left side of the upper jaw. And in the following case, communicated to me by my friend Dr. Kirkes, the only muscles excited to spasmodic action by irritation of a dental nervous filament were those closing the jaws. "A healthy elderly lady went to have one of her back teeth stopped. The tooth was perfectly comfortable the same afternoon and evening; but in

the night the lady awoke with a sensation of difficulty in opening her mouth. This continued; and, in the morning, she was almost unable to separate the jaws so as to take any breakfast. The jaws became more and more fixed during the day, and continued so all the night, rendering the introduction of food almost impossible: She naturally attributed this singular condition to the stopped tooth, though there was not the least pain or sense of discomfort in this or any of the teeth. She proceeded early the second morning to her dentist, who had great difficulty in opening her jaws sufficiently to enable him to get at the tooth, which he then removed, when, almost instantaneously, the rigidity of the jaws ceased, and never returned. It was not ascertained whether the rigid state of the jaws was due to an affection of the muscles of both or only one side of the face."*

Such cases as these, taken in conjunction with that of the warder at Millbank Prison, illustrate in a striking manner the remark of Dr. Watson, that, in cases of epilepsy, it is expedient to observe "what muscles or sets of muscles are first affected by the spasm, and in what part the warning 'aura' (if there be any) arises; because, by accurately noting these particulars, we may, perhaps, be led to a knowledge of the part or organ in which the irritation operates; and, if we know the seat of the irritation, we shall be more likely to know its nature and its cure." The first view of such cases further suggests the hope that, by a more careful application of this principle, cases of epilepsy, and other nervous disorders, which now too often baffle our efforts at cure, might more frequently be traced to local causes, especially irritation about the teeth, and thus more frequently be brought under the influence of remedial measures. The principle is, indeed, an important one. The *possibility* of epilepsy, local muscular spasm, even tetanus, and certainly neuralgia, being dependent on eccen-

* A similar case is referred to by Haller, in the words "Ex usto dente, nervo denudato, maxillæ clausæ." But instances of simple trismus from such causes are not common; though several cases are recorded in which injury to the teeth or alveoli has been followed, first by trismus, and then by general tetanus (Tomes, *Dental Surgery*, p. 321; and Gall, *London and Edinburgh Monthly Journal of Medicine*, 1842, p. 422).

tric irritation, and of the seat of the irritation being traced in the manner described, ought to be borne in mind when cases of these disorders are investigated. And yet it is not to be expected that the cause of the disease and its cure *will be* thus discovered, except in comparatively rare instances. In the majority of cases of epilepsy, certainly, no warning spasm or "aura" ushers in the fit. And when these premonitory symptoms do exist, they serve, as Dr. Watson's words indicate, only occasionally, not constantly, as a guide to the seat of the irritation on which the attack depends. For, although the warning "aura" and the spasms in some cases result from the reflected action of an eccentric irritation seated in the part where they show themselves, they in other cases are occasioned by irritation in a distant part of the body, or even by a general or a centric cause. In the latter cases the locality of the premonitory symptoms appears to depend on a peculiar excitability of the particular portion of the nervous centres which presides over the affected nerves and muscles; this excitable segment of the brain or spinal cord being the first to react under the influence of the distant or centric cause of irritation.

The probable pathology of the cases last referred to, as regards the precursory spasms or morbid sensations, is illustrated by the analogous instance of local spasms. There are certain forms of spasm of frequent occurrence which seem in most cases to depend on this morbid excitability of the particular part of the nervous centres engaged in their production. Thus laryngismus stridulus is not caused by one special kind of irritation, or by irritation of one special nerve. The disposition to the spasm is the only fixed character of the disease: the cause exciting it may act on almost any centripetal nerve—in the teeth, in the stomach, in the intestines, or even in the skin: it may be an impression on a nerve of special sense, or an emotion of the mind. This has been well elucidated by Dr. Marshall Hall; and the same principle is made apparent, with regard to the spasmodic affections of the muscles of the neck, by the following cases, which came under my own observation:—

Master H. A——, a boy five years old, had, from the age of three years and a

half, been subject to fits of spasm in the muscles of the neck, which drew the head backwards and towards the left shoulder, and, while they lasted, fixed it there. In the earlier attacks he had been seen by Dr. J. R. Farre, who had traced them to the irritation produced by undigested food in the alimentary canal. The boy's mother told me that an emetic or an active purge immediately set free the contracted muscles; and, by my own observation of several of the attacks, I was enabled to verify her statement. More recently I was called to see the nephew of this patient (the son of an elder brother), a child aged ten months, and found him labouring under a spasmodic attack of exactly the same kind. Purging had not relieved it: but he was cutting an incisor tooth. The gum was freely lanced, and the muscles of the neck quickly became relaxed. With every tooth that this child afterwards cut he had a return of spasm in the muscles drawing the head backwards, which as often yielded to the same remedial measure. The last of his first set of teeth came through the gum some months ago, and since then he has not suffered from the spasmodic attacks.

It can scarcely be doubted that, in these two cases, in which spasm of the same muscles was excited by different eccentric irritations, the *locality* of the spasm was determined by the special excitability of that part of the spinal cord which is connected with the motor nerves of the cervical muscles. And in the same way the locality of the first movements, or of the warning "aura," in many cases of epilepsy, probably depends on a similar excitability of the nervous centre of the part, and therefore is not indicative of the seat of the eccentric exciting cause, even when such a cause exists.

The question practically most important is, then, whether the spasms or warning "aura" really due to eccentric irritation seated in or near the affected part have any peculiar characters by which they may be recognised. This question, I believe, has not even been touched upon by writers on epilepsy; and the recorded cases of epilepsy in which a cure was effected by the removal of diseased teeth or other sources of irritation, are so briefly related that even the circumstances which drew attention to the irritating cause are rarely

alluded to; and, if local spasms are mentioned, they are never fully described. There are, however, some differences in regard to the seat of the spasms which in many instances would distinguish those caused by an irritation in the part itself from those depending on a morbid excitability of the corresponding portion of the brain or spinal cord. Spasms of the latter class would most frequently affect one or other of the parts which are known to be peculiarly liable to spasm from internal or centric causes, or from distant irritations,—such as the larynx, the muscles closing the jaws, the neck, the two hands, &c.; but spasms of the former class would not by preference be seated in such parts. On the other hand, these spasms, arising from immediate excito-motory action, would commonly commence in parts having a normal anatomical and physiological connection with nerves much exposed to irritation, such as those of the teeth and alveoli, or involved in wounds, cicatrices, or tumours; while the locality of the other class of spasms is, of course, independent of such circumstances. The distinctive characters of spasms due to irritation in or near the affected part, which are here indicated, would generally be obvious enough; and, in the cases where the precursory spasms of epilepsy have led to the discovery of the cause and cure of the disease, attention has doubtless been directed to them chiefly by the peculiarity of their situation and the presence there of a possible cause of irritation. In the case of the lady cured of epileptic fits by the removal of a tumour from a nerve beneath the gastrocnemius muscle, Dr. Short* appears to have sought the irritation there, not from a knowledge that anything abnormal existed, but simply from observing that the spasms always commenced in the muscles of that leg. The mere unusual seat of the spasms will, however, rarely be a sufficient guide. There were better means of diagnosis in the case related by Sir B. Brodie,† where, in addition to the fact of twitchings in one leg preceding the epileptic convulsions, there was the presence of a musket-ball in the leg, constituting an adequate cause of irritation to the nerves of the limb.

But it sometimes happens that the

spasms arise in a part which is liable to be so affected from various causes, and yet is the seat of a probable or possible cause of irritation. Thus trismus is one of the forms of spasm frequently arising from centric or distant irritation, as where it precedes tetanus; but any irritation about the teeth would be adequate to cause it by direct reflex action; and if, in a case of epilepsy, the paroxysms were said to be preceded by lock-jaw, and the cause of the disease were not made clear by the history, we might be unable to decide whether the teeth were in fault or not. Under such circumstances, and in others of analogous nature, the case of the warder at Millbank Prison suggests that aid towards solving our doubts might be derived from a more careful inquiry into the characters of the precursory spasms. It has already been noticed as a striking feature of that case, that the convulsive movements, beginning in the muscles of the cheek, *extended gradually* to those of the tongue and jaw, and thence to the side of the head and face generally, before they affected the whole body. The same peculiarity was observed in the analogous case of convulsive movements arising from the same cause, which has been quoted from the Medico Chirurgical Transactions; and, in a third case, related by Sir E. Home, in the Philosophical Transactions for 1801, where irritation or inflammation of the nerve of one thumb, originating in mechanical injury, gave rise to spasmodic paroxysms ending sometimes in coma, the muscular spasms commencing in the thumb had the same character of extending gradually up the limb to the trunk. A little consideration, indeed, leads to the inference that local spasms ought generally to possess more or less of this character when they result from an eccentric irritation acting on healthy nervous centres, and producing, in accordance with physiological laws, reflex muscular movements in the parts with which the irritated nerve has normal relations. If such be the case—if spasms arising from irritation in or near the affected part commence constantly in the same muscle or limited group of muscles, and extend gradually to other muscles in the order of their contiguity, in consequence of the excito-motory influence conveyed to the nervous centre extending progressively to the motor nerves arising from the next

* Edinburgh Medical Essays and Observations, vol. iv. p. 334, 5th ed.

† On Local Nervous Affections, p. 15.

contiguous parts of the same lateral half of the spinal cord—this is a distinctive character; for local muscular spasms, which are the mere manifestation of the special excitability of the particular part of the brain or spinal cord presiding over the affected muscles, involve at once the whole group of muscles, or the muscles of an entire region, as the neck, or corresponding parts of the two sides of the body, and do not extend from a centre gradually to neighbouring parts.

How far the distinctions here pointed out are applicable as a means of diagnosis in epilepsy must be determined by future observation. But there certainly appear to me grounds for believing that, at least in some cases, both of local spasm and of epilepsy commencing with spasm, a closer attention to the mode of commencement and increase of the convulsive movements, as well as the consideration of the degree of liability of the particular part to spasm from internal causes, will aid in determining whether the cause is to be sought there, and relief attempted by the removal of a possible cause of irritation seated in or near the affected part.

In most cases of epilepsy the history will much aid the diagnosis of the cause, connecting the disease, perhaps, in its origin and course, with a special irritation. The inquiry into the history of a case of epilepsy is, indeed, generally speaking, a far more important mode of investigation than is the observation of the precursory symptoms; for in every variety of the malady the history may throw light on its pathology; while the warning "aura" and spasms are, in the majority of cases, not present, and may be absent even where the disease arises from an eccentric cause, if the brain and spinal cord are generally very susceptible of the morbid influence. Nevertheless, in a disease usually so intractable, any *occasional* aid to be derived from these symptoms cannot wisely be neglected; and the principal object of the foregoing remarks has been, by directing attention to the differences which the spasms in different cases present, to render any information they are capable of affording more easily available.

It is not improbable that the epileptic "aura" likewise presents differences corresponding with the conditions on which it depends; but the investigation of its characters will always be more

difficult, since they can be learned only from the relation of the patient, while spasmodic movements may be observed by others, perhaps by the medical attendant himself, and may still for a time give valuable information after the patient has lost consciousness.

CASE OF PERMANENT STRICTURE OF THE ŒSOPHAGUS. BY PAUL F. EVE, M.D.

DURING the course of lectures in the University of Louisville, Ky., I was invited by Professor Rogers to see, with him, a case of *dysphagia constricta*, which had been under his care for a few weeks. The patient was a mulatto boy, aged 3 years, who, some four months previously, had swallowed, through inadvertence, a portion of caustic potash. In its deliquescent state he had taken it for candy. The act was immediately followed by alarming symptoms, but which, unfortunately, were attempted to be combated exclusively by domestic remedies.

When Dr. Rogers first saw the case, the dysphagia was so great that fluids could with difficulty be swallowed; and a bougie was now at once arrested in the Œsophagus by an apparently permanent stricture. We were not certain that any nourishment ever entered it. The patient's constant cry was for water, which he would swallow down to the obstruction, retain it a few minutes and then reject it from his mouth. He rapidly emaciated. Ice-cream, milk and water, beef-tea, &c., were recommended; and, if none of these could be gotten down, nutritious enemata to sustain the system.

The stricture was situated six inches from the dental arches—below the most usual seat for such affection—which is the connection of the pharynx with the Œsophagus.

The middle of December last, this patient becoming daily more feeble, was presented to the class at the college clinic, with the view to an operation, should one be deemed advisable. He was now reduced almost to skin and bones; neither could his pulse be discerned at the wrists. It was not until he arrived at this low condition that his master consented to consider the question of Œsophagotomy. It was decided in consultation not to operate, and the death of the patient was predicted as probable during the first cold spell of weather. About ten days after this, a post-mortem revealed a permanent contraction with thickening of the Œsophagus—the diameter of the strictured portion being reduced to about a line for an inch and a quarter, and which was also quite to transverse in its course. The stomach was contracted and reduced to a very small capacity; but the ileum, to our surprise, was largely distended with feces.

—*Southern Medical and Surgical Journal.*

MEDICAL GAZETTE.

FRIDAY, SEPTEMBER 26, 1851.

WE insert in another part of this number, and opportunely to the commencement of another medical session, a letter seriously impeaching the present system of examining candidates for a medical license or diploma. While we do not concur in all the opinions of the writer of this letter, we think his remarks on the GRINDING SYSTEM deserving of the serious attention of our Boards of Examiners. We know the writer, and believe that he is only truthfully stating facts which have come under his own knowledge; and a sad picture does his letter present of the actual state of medical education, and the mode in which the best intentions to improve it may be nullified. "Gentlemen *prepared for five pounds* for the Colleges of Physicians and Surgeons, the Apothecaries' Hall, and University of London!" Such is the announcement which meets the student on his arrival in the metropolis; and, if we are to judge from the experience of OBSERVATOR, a man cannot feel secure of procuring his diploma except by following sooner or later the current which leads him into the vortex of the grinding system.

The evil of "grinding" has been long known to exist, but the extent to which it is actually carried is probably not known to any one Board of Examiners. Let a man be ever so industrious,—let him attend lectures and hospital practice with exemplary assiduity, and have a mind well stored with professional knowledge,—still as a rule he dreads to encounter Hall, College, or University, unless he has undergone that preliminary "stuffing" which the regular routine of Hall, College, and University

questions has rendered absolutely necessary. OBSERVATOR clearly shows how a well-informed man may incur the risk of rejection: he does not come up to the artificial standard which his examiners by routine and habit have fixed for a successful candidate;—he has omitted to inform himself of the latest discovery in some branch of medical science.—he is not up in the cacodyle series;—he cannot enumerate the 262 orders of *one* of Lindley's Classes of the Natural System; and is unable to refer a plant on the table to the *aceæ*,—*iferæ*,—*ineæ*,—*ideæ*, or some other *æ*. If asked to assign to its proper order an "Hexapetaloidous herbaceous monocotyledon with a superior ovary, a half glumaceous regular perianthium, a pale soft testa, a single style, capsular fruit, and an embryo next the hilum," he gives the vegetable problem up in despair! He has not been ground for this sort of botany, in which a knowledge of words is substituted for a knowledge of things, and he is either rejected, or he receives a lecture upon his deficiencies. The "ground" candidate will show much erudition, obtain his license with credit, but have every thing to learn after he has obtained it.

What is the cause of this evil? and What is the remedy? We agree with OBSERVATOR in thinking that the principal cause is to be found in the fact that all men, however learned or experienced, have their crotchets in scientific matters, and these crotchets *will* protrude themselves when their owners are called upon to test the knowledge of junior candidates. Our Boards of Examiners, if we except that of the Royal College of Physicians, which annually undergoes a partial change, are permanent. In the course of time, an examiner thus occupying a permanent office must make known his opinions and peculiar views; he may be effectually gauged by sharp-witted men, both as to the nature of

his questions and the answers which will be most satisfactory to him. It was remarked of the late Professor Daniell, when Examiner of the University of London, that, although nominally instituting an examination in Chemistry, his questions always bore on Chemical philosophy, and the Voltaic pile. In consequence of this, there was a very great demand for his book just before the examinations took place. The same principle holds in other cases: and one unfortunate result of this system is, that the anatomy, physiology, botany, medicine, and chemistry, taught in the schools, are measured and valued only as they meet the requirements or the peculiar views of the members of our Examining Boards. The object of the student is to pass his examination: he cannot do this without looking to the peculiar views of his examiners. Thus, then, the mode of teaching must bend to the style of examinations for the time being, or the anxious student has no other alternative than to resort to the grinder. There must be something defective in a system which leads to such results: for professors of the branches of medical science, who do not occupy examinerships, cannot be expected to surrender their independent views, which in some instances may be based on sound experience and observation, to doctrines probably in some cases derived from reading or second-hand information. We do not say that it is necessarily so, but it by no means follows that because a man through talent, accident, or good fortune, occupies an examinership, he is thenceforth to be regarded as an absolute oracle in the science in which he professes to examine, and to control the opinions of others who may have been engaged for an equally long or even longer period in the practical study of the subject.

The *permanency* of Examining boards, consisting of a small number of persons, has then a strong tendency to encourage grinding, and to mould medical teaching to a routine set of opinions and doctrines. However a student may respect the views of his *teacher*, if they be adverse to those of his *examiner* he has no option but either to surrender them or to incur the risk of rejection.

What, then, is the remedy? OBSERVATOR points to one which we think must hereafter be adopted, if there be really an intention to improve the status of the professional man. Let the list of examiners embrace all living within a given district, who are competent to test the knowledge of candidates; and let this list include those who either teach or have taught the special subjects upon which examinations are instituted. Let the names be taken in rotation on the principle of the jury lists, so that no man shall know whom he will examine, or, on the other hand, who will be his examiner. To avoid the risk of bias, let it be a rule that if the examiner be a teacher, he shall not be competent to examine a pupil of his own school. A fee fund might be created, and the proceeds divided after the expenses were paid: each examiner would receive his share, according to the number of attendances. The system of permanent examinerships with fixed salaries has had a long trial, and has failed to give satisfaction. We believe that the members of the Apothecaries' Society, who cannot under their Act help themselves in the matter, are very desirous of a change; and we trust that in the general reform of medical education and practice, this subject will receive the consideration which it deserves.

In our weekly record of the proceedings of the Academy of Medicine in Paris,

we have given a short abstract of a voluminous report relative to the appearance of the SWEATING SICKNESS in France. This disease, called by the French *la Svette d'iliaire*, has of late years appeared epidemically in different parts of France at various periods, and with some variations as to severity.

The occurrence of the Sweating Sickness on the Continent cannot be devoid of interest to ourselves. The epidemic that has been recently noticed in France, appears to differ only in degree from the Sweating Sickness that devastated England in 1485, 1506, 1517, 1528, and 1551. In France it has appeared concurrently with CHOLERA and TYPHUS; in England it was coincident with Malignant Fever, PLAGUE, Famine, &c.; in both countries it has been prevalent when the physical and moral condition of the people has been debased.

The documents upon which the report presented to the Academy has been founded have not been compiled from books: they are the result of direct personal observation of the disease; they record facts,—hence they demand our attention.

We have in these documents the prominent features exhibited by a pestilence which is new to this generation; and although the Commission observe that they rather indicate the points upon which information relative to this disease is still wanting, than actually supply it, they are nevertheless of undoubted interest and value, as they contribute matter to the history of epidemics.

Epidemic diseases, it is obvious, will generally be more active in proportion to the density of the populations among which they appear. At the present day there is no change more evident and certain among those which mark a transition state of society than that of the increase of town populations at the expense of those of rural districts; and this gradual

change produces, as one of its consequences, a concentration of the force of epidemic visitations in large cities. We would, therefore, while disowning the character of alarmists, call attention to the plain warning that is here conveyed to us,—not to suffer time to pass away in words about sanitary improvements, while we should be dealing with facts.

The reappearance in a neighbouring country of a disease which spread such terror in the middle ages, and led to a fearful amount of mortality, is a subject which cannot be contemplated with indifference. The edicts of an incompetent Board of Health will neither prevent the spread of the disease nor mitigate its severity, if, after the long interval of three centuries, it should again show itself in England.

Reviews.

Observations on the Site and Construction of Hospitals. By Sir GEORGE BALLINGALL, M.D., F.R.S.E., Surgeon to the Queen and to H.R.H. the Duchess of Kent; Regius Professor of Military Surgery in the University of Edinburgh. 4to. pp. 19. Edinburgh: Maclachlan and Stewart. 1851.

THE author of this work was solicited to contribute the article "Hospital" to the Cyclopædia of Surgery; that undertaking, our readers are aware, was never completed; Sir George Ballingall's article was subsequently separately printed, and was briefly noticed by us in one of the volumes of our present series. The essay now before us consists of the revision and enlargement of that paper, and demands more than a mere notice at our hands. We shall, therefore, endeavour to present a full analysis of the contents of this very valuable monograph.

The author, in the first place, gives a short sketch of the history of hospitals, and states the well-known fact that no account of Civil Hospitals exists before the Christian Era,—a fact strikingly illustrative of the genius of Christianity, which universally acts upon

and carries out to the utmost the Samaritan spirit. We have, however, read somewhere that a hospital did exist before Christianity, but it was devoted to *Dogs*.*

Some of the earliest of the hospitals in this country appear to have been appropriated, the author remarks, to patients labouring under particular forms of disease, as the Lazar houses of Scotland. The first general hospital erected in England was that founded at Canterbury, in 1070. by Lanfranc, Archbishop of that See,—one of the countless advantages of the advanced civilization introduced into England by the Conqueror. Among the earliest provincial hospitals were the Radcliffe Infirmary at Oxford, and the Infirmary at Bristol, originally fitted up under the suggestions of the philanthropic Howard. The author refers to several other interesting facts connected with the historical part of his subject.

In selecting the site of a hospital, the characters of the soil, elevation, salubrity, &c. of the position, require more careful attention than is often bestowed. This has been frequently seen in the evils that have resulted from the choice of an insalubrious site.

The author deprecates all superfluous ornament or elaborate designs in the construction of hospitals. "The house itself becomes faulty, standing in need of constant and expensive repairs; but we cannot bring our minds to throw down a building which has become interesting for its history, venerable for its antiquity, and of which the ornamental front is, perhaps, the only remaining monument of an age gone by." These poetical feelings do not, however, always stand in the way of the renovation of ancient hospitals. Of this we have an instance in the refacing of Saint Bartholomew's Hospital, where the venerable appearance of the old building has been destroyed by a new casing of stone.

Sir G. Ballingall is of opinion that it would be favourable to the interests of the sick if all hospitals were built, like some London houses, to last only a given number of years. "Old buildings," the author states, "have some-

times become unfavourable to health from causes which it is not easy to define or to specify." In support of this indefinite opinion the author quotes the high rate of mortality in the Hôtel-Dieu at Paris, perhaps the oldest hospital in modern Europe, as contrasted with that in more recent buildings. The author also cites the statement by the late Mr. Liston, that for some time after the opening of University College Hospital, the rate of mortality after amputation did not, he believed, exceed one in twenty. Nevertheless, without more specific reasons for the fact, we cannot attribute such statistical varieties to the mere antiquity of a building, more especially in past ages, when ground was less valuable, and houses and public buildings were frequently built on a much larger scale than can ordinarily be afforded in the present day. At the same time we fully admit the truth of the assertion that "hospitals are not necessarily or even advantageously made of an expensive character."

The annual cleansing, whitewashing, and repairing the walls of the wards of hospitals, if performed thoroughly and carefully, would be, as the author suggests, a certain means of promoting the salubrity of the wards.

With regard to the form of a hospital, the author with justice objects to the quadrangular form, as favouring the accumulation of stagnant air: this must certainly occur, unless the quadrangle be very spacious. The best form to meet the requirements of a free access of air and light, Sir G. Ballingall suggests, is that of the letter **H**. In this form the Cheltenham General Hospital is built, and which the author considers "one of the neatest, most commodious and compact little hospitals" with which he is acquainted.

The minor details and arrangements of the interior are all considered by the author, who enforces the great importance of placing the wards on such an elevation as to ensure thorough and free ventilation,—a complete passage of air through the building from one side to the other, and from one end to the other. Perfect ventilation is much favoured by having the wards wide, lofty, and long: numerous small wards, or several partitions dividing a larger ward, obstruct ventilation, and, as the author observes, give the attendants

* Since writing the above, we have read the description of the Parsee Hospital for Animals at Bombay, by Dr. Berncastle, in his "Voyage to China."

much more work to do in cleaning and washing the floors.

The capacity of a ward determines the number of beds that it may judiciously contain. Sir G. Ballingall finds that the Government General Hospitals, naval and military, give an average of nine hundred and eighty-four cubic feet of space for each patient; the Metropolitan Hospitals, those of London, Dublin, and Edinburgh, nine hundred and forty-seven cubic feet; and the Provincial Hospitals nine hundred and forty-four cubic feet. One thousand cubic feet the author thinks a fair allowance in this climate for General Hospitals. For convalescents, or those labouring under slight ailments, eight hundred cubic feet may be considered sufficient for each person.

The author's remarks upon the ventilation of hospitals are clear and concise: the subject is divested of much of the difficulty that is usually supposed to attend it. The principle pointed out is simply the removal of heated and impure air from above, and the supply of an influx of fresh pure air from below.* The manner of applying the principle to circumstances is also clearly laid down. The author speaks very highly of Dr. Arnott's plan of ventilating rooms by the apertures in the fronts of the chimnies.

At the conclusion of his essay the author gives a list of works on Hospitals.

This paper will be found of great service to all who are engaged either upon the designing or erection of hospitals; both the architect and the medical and surgical superintendents may hence derive suggestions of the greatest practical value.

On the Prevention and Cure of Spinal Curvatures and Deformities of the Chest and Limbs; being the result of many years' experience. By MRS. GODFREY, Renshaw Street, Liverpool. 8vo. pp. 90. London: Churchill. 1851.

THE claims to attention possessed by Mrs. Godfrey as a female writer on a medical subject, are, that her husband is a surgeon of long experience and practice, that she had been in the habit

of assisting him at his examinations of female patients who consulted him for affections of the spine, &c., and that in this way her attention had been particularly directed to the class of cases to which she has since entirely devoted herself. In order to qualify herself for the task which she had undertaken, Mrs. Godfrey appears to have studied anatomy to a certain extent, and thus, with the aid of her husband's instructions, has acquired sufficient information and experience on the treatment of deformities of the spine, &c., to entitle her work to a respectful reception at the hands of medical men. Besides these extrinsic claims, we think that the work has intrinsic merits which will gain for it more than an ephemeral notice or mere hasty perusal.

"Mrs. Godfrey's principle of treatment is to dismiss all instruments and mechanical contrivances which restrain the movements of the body, and to use frictions, manipulations, exercise, &c., by which the displaced or distorted limbs and bones are gradually restored to their natural state, in at least a large majority of cases, and relief and amelioration of deformity are afforded to the minority." We extract a case in illustration:—

"When this lady first came to me" (the ease was one of long standing) "the supports and stays were, at my request, laid aside, and, instead of them, a bodice, made in the same manner as her dress-body, was substituted. Manipulation of the intercostal muscles, with the use of animal oil, was resorted to; and the fingers were forced as low as possible between the ribs on the left side, which were much depressed and inverted, causing the shoulder to sink. The muscles between the extended ribs of the right side were worked down upon, and the ribs compressed together with both hands, with a view to make them approximate, thereby attenuating the muscles. By this method the left side derived equal benefit with the right; for it is remarkable to see how the left ribs extend, and the muscles rise, while those on the right are pressed together. . . . In connection with the above treatment, the lady was put under a course of extension exercises, resting in the recumbent position between them. . . . At the end of six months her figure was quite perfect" (p. 10).

The only machinery used by Mrs. Godfrey consists of weights attached to cords, to be drawn up and down, and a gymnastic ladder. The authoress re-

* This principle is efficiently carried out by a simple and elegant contrivance devised by Dr. Chowne.

pudiates the method of cutting down upon the muscles as strongly as she does the system of artificial supports and machinery for pressure, extension, &c. &c. Equally emphatically, and with much justice, does Mrs. Godfrey inveigh against the constant recumbent posture.

Many cases are related in which the treatment here recommended has been found successful in the cure of distortions of the limbs as well as in spinal curvatures.

The observations on the use of stays are worthy of notice. The authoress follows a judicious middle course, not doubting or denying the injurious consequences that have resulted from their misuse, but pointing out, also, that equal or greater injury may be produced by bands, strings, buttons, &c., unless very carefully adjusted. The authoress relates several instances of curvature produced by the unequal pressure of the shoulder-straps of girls' dresses. On the whole, Mrs. Godfrey is of opinion that less harm has been done by stays than by some other articles of dress.

Mrs. Godfrey in like manner shows very great judgment in her observations upon the effect of posture, as predisposing children to deformity. We can also confidently commend this lady's advice with regard to children's exercises and sports. On this point we quote the following remarks, which will fairly represent the style of the authoress, which is throughout easy, without being diffuse or light.

"If, for instance, we examine the various attitudes and motions of the body which occur in fencing, dancing, swimming, shuttle-cock playing, and some of the better class of gymnastic exercises, we find that they are not less graceful and beneficial to the young who engage in them than pleasing to those by whom they are witnessed, just because they are in perfect harmony with nature, or, in other words, with the structure and mode of action of the joints, ligaments, and muscles by which they are executed. But it is far otherwise with some of the anomalous exercises which were at one time so fashionable, and which are not yet extinct in schools and gymnasia, and which seem to have for their chief object the conversion of young men and women into foresters, firemen, or savages, rather than into beings who are to continue to have the use of stairs, ladders, carriages, steamboats, and other conveniences of civilized life," &c. &c. (p. 58).

Diet, clothing, general regimen, education, mental exertion, &c., with reference to children, are all in turn treated by the authoress in this work. We are usually most jealous in guarding the non-professional public against pseudo-medical works written by non-professional persons. The work, however, which we here bring under the notice of our readers, forms a striking exception,—if, indeed, it can be altogether regarded as a non-professional work. It is full of good sense, and of the results of experience improved by good powers of observation, and corrected by study and opportunities which the authoress has turned to advantage.

Lectures on the German Mineral Waters, and on their Rational Employment for the Cure of certain Chronic Diseases. By SIGISMUND SUTRO, M.D., Senior Physician to the German Hospital, &c. &c. Small 8vo. pp. 431. London: Parker. 1851.

WE give the author's object in the publication of this work in his own words.

Referring to the works of previous writers on the Baths of Germany, Dr. Sutro remarks:—

"But though they have succeeded in imparting a great amount of information in a very pleasing manner, yet it will happen that any work on the German Mineral Springs, taken up for the purpose of *choosing* between spas of analogous properties, will leave the reader embarrassed and undecided by the very variety of the remedial agents submitted to his choice."

The author has proposed to himself the task of facilitating the inquiry as to which of these baths is to be selected as the most appropriate in any particular case.

A faithful description and record of the claims of the several springs, by an accomplished German physician who has personally visited them for the special purpose of ascertaining their merits, and has impartially reported thereon, cannot fail to be highly acceptable to the English professional reader; and such we believe to be the character of Dr. Sutro's work. Although the author admits the potent influence of change of scene, &c., as contributing to the therapeutic influences of baths and springs, he nevertheless claims for the

latter a positive action in the removal or arrest of morbid processes, provided a selection be made with due consideration of the qualities of the waters, and the nature of the ailment for which their curative agency is sought.

It would be impossible to follow the author in his descriptions of the springs, but from our perusal of the work we feel assured that this will be found a safe guide. Besides affording the grounds of selection out of so large a number of baths, it will convey useful and interesting instruction on the general subject of mineral waters, and their various constituents. The essay is written in an agreeable style, and contains sufficient topographical and other collateral information to render it a popular as well as an instructive work.

Proceedings of Societies.

NEWCASTLE AND GATESHEAD PATHOLOGICAL SOCIETY.

March 1851.

MR. GILLESPIE presented a

Fibrinous Cast of the Uterus,

of the size of a hen's egg. It was filled with bloody serous fluid, and its walls were composed of layers of partially consolidated fibrine. It had been passed by a middle-aged woman, whose left ovary was enlarged, and a similar one had been passed by her two months before, accompanied with great hæmorrhage. The uterus was supposed to have formed it from sympathy with the ovarian disease, which was of recent date. The patient, who was weak from the loss of blood, soon recovered under the use of steel and injections of nitrate of silver. The ovarian tumours remaining in a quiescent state, the uterus did not again cast-off adventitious membranes.

Fibrinous Casts of the Bronchial Tubes,

expectorated by a middle-aged sailor affected with chronic bronchitis, were also exhibited by Dr. Cargill. The patient had expectorated a great number of them at various times. Most of them were about the size of a goose-quill, others almost double that diameter. They were always preceded and cast off with a great increase of dyspnoea and expectoration, and ceased

entirely when the patient was in a convalescent condition.

Dr. CARGILL exhibited a

Liver affected with Malignant Disease.

The patient, a tide-waiter, and formerly a seaman, aged 34, was admitted under his care at the Newcastle Infirmary, on the 2d of May, 1850, and died on the 23d of Feb. 1851. Of the nervous-bilious temperament; duration of the malady eight months. Has been a hard drinker. When admitted he had ascites to a considerable extent. No anasæra; body much pined, and face sallow and jaundiced. He had been tapped before admission three times. The lower right chest dull nearly up to the nipple; presumed to be from the liver passing upwards. Base of left lung likewise a little dull; respiration everywhere almost normal. He was put upon a diuretic treatment of nitrate and carbonate of potash, with spirit of juniper and nitre, along with Hyd. c. Creta and Dover's powder, with an aperient draught occasionally, and light diet. This was continued for a month, with relief to all the symptoms, the chief of which were pain at the base of the right chest, and flatulence, when the ascites making a rather sudden increase, he was tapped, and nearly a pailful of thin clear fluid drawn off. It was now evident that the liver was shrunk, hard, and uneven to the touch. He improved, however, under the same diet and medicine, with a glass of ale daily, for twenty days, when he was made, at his own request, an out-patient, but returned in six weeks time as ill as ever. Great ascites, for which he was again tapped, and twelve quarts of clear serous fluid removed. Liver again felt to be indurated and irregular. He was now very weak, and had a chop daily, and two glasses of gin. Tapped again in three weeks, and a pailful of the same kind of thin clear fluid removed. He kept improving under effervescents and opiates occasionally, the pain in the side and over the liver being almost gone; but at this time he experienced very frequent distension of isolated portions of the abdominal region, with severe pains in those parts, and the abdominal parietes presented to the hand a feeling of irregularity and doughiness; the countenance became additionally sallow and waxy-looking, and the flatulence and dyspnoea were often distressing. Paracentesis was now again performed, six weeks having elapsed since the previous tapping, and he was ten days afterwards made an out-patient.

He greatly improved for nearly two months, under much the same general

treatment, and it was thought singular that no ascites ever took place again up to the time of his death, which occurred about five and a half months afterwards. He, however, suffered greatly, for the last three months of his life, from epigastric and abdominal pain, often causing him to hold himself bent downwards, with frequent purging, and sometimes bloody stools. An abscess in the neck also formed, and discharged much purulent matter.

The treatment, in addition to the diuretics before mentioned, was varied to meet the pressing symptoms, as they successively arose. Opium, chalk, and aromatic confection, always allayed the diarrhoea and pain; and ether, aromatic ammonia, camphor, &c., were most successful in removing the flatulence.

The diagnosis was malignant degeneration of the liver, with adhesion of it to the lower right ribs and diaphragm. Peritonitis, with extensive obliteration of the abdominal cavity, by irregular adhesions between the parietal and visceral layers of the membrane; deposits of lymph, and, probably, of malignant exudation.

Post-mortem appearances.—The yellow, waxy-looking skin of the abdomen and sides of the chest covered with varicose veins. The abdomen distended, and its appearance resembling the bellies of children with mesenteric disease.

Cavity of peritoneum entirely obliterated by thin, fine adhesions of the two surfaces, by bands of lymph evidently of considerable standing.

Liver rather smaller than natural, and bound to the under surface of the ribs and diaphragm by very firm adhesions; its peritoneal covering thickened and opaque from large deposits of old lymph; its surface irregular and puckered, and presenting numerous indurated elevations. On incising it, the healthy structure of the organ was found to have been entirely destroyed. Large and firm bands of condensed cellular tissue constituted a great part of its structure: the remaining constituent was a fatty, flesh-like structure, existing in detached round masses of various sizes throughout the whole of the organ, and evidently the true secreting structure metamorphosed. There were no traces anywhere of the lobular secreting portions of the liver. Under the microscope, this firm, fleshy, wax-like tissue was found to consist of the altered secreting-cells of the liver, in very sparing numbers, deformed, filled with fatty exudation, and a vast amount of exudation-granules. A few tubercular-looking deposits were also found in some parts of the liver.

Stomach slightly congested. *Spleen* of

natural size; and all other organs generally exsanguine, but remarkably healthy.

REMARKS.—The most remarkable circumstances about this case are—1st, the morbid change undergone by the liver itself—a change I have not met with before, nor seen figured; cirrhosis, perhaps, resembling it the most, though, on examination of the specimen before you, many points of difference will be observed.

2nd. There was one very curious symptom occurring constantly during the progress of the disease, and that was, that always, for some time after tapping, and until the fluid re-accumulated, he felt increased pain under the right false ribs, and a notable increase of dyspnoea. The evacuation of twelve or more quarts of fluid increased for many days the dyspnoea instead of relieving it, and the sharp dragging pain under the ribs was more distressing. It was this that made me diagnose effusive adhesion of the liver to the ribs and diaphragm; for I thought the cause might be the sudden abstraction of the support to the liver afforded in some degree by the fluid, and a subsequent dragging of the adhesions by its unresisted weight. The pain of this might have prevented that lung from being used, as in pleuritic inflammation, and so caused dyspnoea.

3d. The spontaneous cure of any farther ascites after the seventh operation of paracentesis. This was effected by the complete obliteration of the peritoneal cavity by exuded lymph and fibrinous bands gluing together the two opposing peritoneal surfaces. This has been a very gradual action; the first symptoms of it—viz., abdominal pain and tenderness, flatulence, vomiting, and diarrhoea, commencing very nearly six months before death, and not apparently excited by the tapping; a fortnight subsequent to one of which it began, and no tapplings having been followed by any uneasiness that was discoverable. The grand symptoms produced by the peritoneal adhesions and obliteration of its cavities were vomiting and diarrhoea, flatulence and pain.

Mr. POTTER related the following case of

Excision of the Clavicle,

and exhibited the patient to the Society for inspection.

Agnes T—, aged forty-two, married, and the mother of several children, became a patient of the Newcastle-upon-Tyne Infirmary, Sept. 21st, 1848. She states that her health was very good until about ten months ago, when she was much debilitated by continued night-watching, in consequence of illness in her family. She then

felt, for the first time, rheumatic pains in the left arm, but did not notice any enlargement of clavicle until between three and four months afterwards, when she perceived a small, firm swelling about the middle of the bone, which she supposed to have been produced by coming sometimes in contact with the bed-post, during her attendance upon her sick family. From that time the tumour has gradually increased in size, attended with lancinating pain, which is always worst at night, and prevents her from sleeping. The pain now extends down the arm, and has so impaired the use of the limb that she is unable to perform her household duties. This pain, and the consequent loss of sleep, have greatly injured her health, and she has now a very cachectic appearance. The middle portion of the left clavicle is much enlarged, and painful to the touch; it has a firm and inelastic feel; about an inch at each extremity of the bone is free from swelling. There is no evidence of any syphilitic taint in the system, nor does it appear that there is any hereditary tendency to disease in the family. Various remedies have been employed, but no good effects have resulted from their use. Leeches, and the internal use of iodide of potassium, were now tried, but no improvement took place; and on the 31st of October the tumour seemed even larger and more painful than it was a month before.

Fearing that the disease might be malignant, and finding that the patient's health was daily becoming more impaired, I determined to remove the bone without further loss of time. The following operation was therefore performed:—

An incision, commencing at the sternal end of the clavicle, was continued throughout the entire length of the bone. Two other incisions were next made at right angles with the first, at about an inch from each end, and the flaps carefully dissected back. An aneurismal needle, armed with a stout thread, made fast to the eye of a fine chain-saw, was now passed beneath the clavicle, at about half an inch from its sternal end, and the saw by this means introduced below the bone, which was then sawn through. Disarticulation of the acromial end was next effected, and a loop of string fastened to the bone, so as to raise it up while the remaining portion was separated from its attachments. No vessel of consequence was wounded, and no ligature was required.

On examining the bone after removal, the disease was found to be caries, which had extensively affected the under surface. It was also found that the whole of the diseased portion had been taken away, and it was therefore not deemed necessary to

remove any more; about half an inch of the sternal end was left attached to the sternum.

No pain was felt during the operation, chloroform having been successfully administered.

The lips of the wound were brought together with sutures and straps of plaster, over which lint, dipped in cold water, and a bandage, were applied. The arm was also properly secured to the side.

On the following day (Nov. 1st) she had "much less pain than she had felt for a long time previous." No unfavourable symptom occurred during the healing of the wound. Union by the first intention took place at the ends of the incisions; every other part healed by granulation.

She left the infirmary in about a month, and was desired to use her arm as much as she could. A mechanical contrivance, to prevent the shoulder from falling forward, was tried; but she soon threw it aside, and a gradual improvement in the use of the arm took place.

She is now (March 15th, 1849,) in a condition to go through her household duties, and feels her arm becoming every day stronger. There is no sinking of the shoulder, and, except when closely examined, no appearance of disfigurement.

In this operation great care was taken to do the least possible injury to the costacoracoid ligament and deep layer of cervical fascia; so that a basis was left for the firm semi-tendinous band which now occupies the place of the clavicle.

March 13th, 1851.—A reproduction of bone has taken place to the extent of between four and five inches, and is gradually going on, so that I expect we shall have, in a few months, a perfect bony union between clavicle and scapula. About half an inch of bone is now all that is required to form such an union. The reproduced bone is flatter and thinner than its fellow on the other side. The bone appears to have been reproduced from two sources:—one, the truncated sternal end of the clavicle; and the other, the firm semi-tendinous band mentioned before, which has gradually undergone the process of ossification.

In case some of the members of the Society may think that the reproduction of bone was owing solely to the truncated end of clavicle, I may mention that in Dr. Mott's case a portion of the scapular end of the clavicle was left, and yet no regeneration of bone took place. In Mr. Travers' case of removal of the clavicle (*Med. Clin. Trans.*, vol. xxi.), there was a reproduction of bone from the sternal end, but only to the extent of two inches.

Instances of reproduction of the clavicle

are to be found in surgical works. Mr. Stanley (*Diseases of the Bone*) gives two instances of necrosis of the clavicle, followed by the complete reproduction of the bone. Moreau mentions a case of complete regeneration of bone. Travers also mentions two cases.

It is possible, however, that some of the authors may refer to the same cases, and that the instances may not, in reality, be so many as would appear from what is stated. When regeneration of bone has taken place (except in Travers' case) the clavicle had previously become necrosed in part, or wholly so,—a separation of the dead portion had gradually ensued; but, at the same time, there was a corresponding regeneration of bone going on to supply the place of the old structure.

The success which has attended the above case may in a great measure be attributed to the great care which was taken during the operation to avoid injuring the costa-coracoid ligament, and it would be well in future operations if this remark be not forgotten.

Mr. GREENHOW presented an
Ulceration of the Larynx from a prostitute
at. 27,

who had been several times infected with primary and secondary affections. She was admitted into the Lock Hospital on the 4th of March, complaining of sore-throat and great dyspnoea, with cough. She had been ill for several months, although not so ill until within three weeks before admission. The soft palate was found to have been destroyed by very old ulceration which was entirely healed. The throat looked pale and œdematous, without any ulceration. The breathing was very difficult, the air rushing through the larynx with a wheezing croaking noise, and the muscles of the chest extending themselves to the utmost to enlarge the chest. There was evidently obstruction at the chink of the glottis from ulceration and œdema, and blisters were applied, and sarsaparilla, with bichloride of mercury; and cal. and opium were administered internally. The blisters gave her a little relief, but on the 7th, three days after her admission, she began to get worse; her breathing became more embarrassed, and the croaking wheezing laryngeal respiration louder. During the night she became partially comatose, the blood gradually assuming a venous character, and in the morning, at half-past nine, Mr. Greenhow performed tracheotomy. She gradually became sensible after an hour had elapsed, during which the respiration was performed with great ease: the lips began to assume their natural appearance; she swallowed some beef-tea and brandy,

and appeared as if she would have recovered: towards the evening, however, large quantities of thin mucus oozed out of the canula in the trachea; she began to sink, and died, gradually becoming comatose and cold, apparently from collapse, and the œdematous condition of the lungs embarrassing respiration.

The autopsy discovered a large ragged atonic ulcer covering the vocal cords, with great œdema and thickening of the mucous membrane, causing almost total obliteration of the chink of the glottis; the epiglottis was half eaten off by old ulceration, which was healed, and the base of the tongue and surrounding parts inflamed, thickened, and œdematous; the lungs were greatly congested, and free of œdema of the tissue, with considerable vascularity of the tubes, and mucous secretion in them.

ACADEMY OF MEDICINE, PARIS.

Sept. 9, 1851.

Chemical Researches on the Fatty Matter of Venous Blood in Man.

M GOBLEY read a paper with the following conclusions:—1. Fatty acids, free or in combination, do not exist in the blood. 2. The composition of the fatty matter of the blood is more simple than is supposed; it is formed of oleine, margarine, cholesterine, lecithine, and cerebrine. 3. Cholesterine is the only crystallizable substance of this fatty matter; it presents all the properties of cholesterine, of the yolk of eggs, and of biliary calculi. 4. The serotine is a complex body, the existence of which is doubtful. 5. The lecithine or phosphoric matter is not susceptible of crystallization; it is the product of the decomposition of oleic acid, of margarine acid, and of phosphoglyceric acid. 6. The cerebrine possesses the properties of yolk of eggs; it contains nitrogen, and in water at a high temperature swells up like starch. 7. The fatty matter of the blood under the influence of putrefaction yields with much facility the oleic and margarine acids. 8. The blood of the ox contains the same fatty principles as human blood.

Report on Sweating Sickness.

M. J. GUERIN, in the name of a commission composed of MM. Dubois, Melier, Martin-Solon, Bricheteau, and Guerin, read an elaborate report on a series of documents transmitted to the Academy respecting the epidemic sweating sickness of 1849. After some general observations upon epidemics, the reporters discussed the facts and infer-

ences contained in these documents by propounding a series of questions.

1st. Does the *sweating sickness* of 1849 resemble preceding epidemics? After reviewing the history of this disease from the scattered and imperfect notices thereof in the writings of Galen and of Cælius Aurelianus, down to the first unequivocal account of the disease in 1465, the reporters compare the English sweating sickness with the same malady as it appeared in Picardy in 1655, and then with the epidemic that has at different times made its appearance in various parts of France, and last in the year 1849. The result of this comparative examination is, that the epidemic of 1849 is but a milder form of the English sweating sickness of the middle ages, and is also identical with the several epidemics that have occurred in France since the year 1712.

2d. Has the epidemic of 1849 reappeared in districts that it had formerly visited? Has it spared some places in which it had previously occurred, and then after a time reappeared? On these points data are yet wanting.

3d. Has the epidemic of 1849 manifested characters similar to those of its predecessors? The answer to this question demands data whereon to determine whether, although fundamentally identical with preceding epidemics, this of 1849 has presented the same forms as those; whether, in the course of the disease, it has assumed different forms; whether it has presented the same form in the different provinces, or in different places of the same province; lastly, whether the same epidemic, during the same period, and in the same localities, has presented sufficiently distinct characters to have constituted distinct types. None of the reports that have been received furnish the necessary information upon these points, although up to a certain point they supply data. The results of treatment would in a great measure assist in the resolution of this question. Here, however, the diversity and even opposition of opinions leave the inference that nervous symptoms have predominated, and have varied with local or originating causes. The course of this epidemic, like that of cholera, was marked by a diminished severity in the attacks towards its decline; so that from being at first severe and fatal, they became slight, and unattended with danger. The diversity of opinion on the subjects of infection and of treatment, and the varieties observed in the symptoms described, present the disease under different forms, but do not supply sufficiently accurate data for the determination of the distinctness of type in different localities.

4th. Have the reports now submitted to

the commission added anything to the characteristics of the sweating sickness? In considering this point the reporters confine their observations principally to the subject of the mode of propagation of the malady. It does not appear that the documents hitherto received afford the determination of this point. Some observers affirm absolutely its contagiousness; others explicitly deny this property. One physician states that those only who had long resided in the district where the disease appeared were liable to its attacks; that strangers were exempt. This fact, the reporters observe, is analogous to what is recorded by historians of the disease in Calais, whither it was imported by the English, and where it was confined to the English inhabitants; whence its name of English sweating sickness.

5. What is the nature of the epidemic of 1849? Some of the authors speak of a change in the nature of the disease: upon this the commissioners observe that the nature of the disease must remain unaltered, although its manifestations may be modified by circumstances. Opinions are divided into those which regard the disease as inflammatory, and those which regard it as a septic malady, involving at once the whole mass of circulating fluids. Of the six reports now under notice, not one speaks of the disease as inflammatory (gastritis), but unanimously look upon it as septic.

6th. What treatment has prevailed in the epidemic of 1849, and what progress has the study of the therapeutic relations of the disease impressed upon its history? The treatment of sweating sickness is far from fixed; bleeding, antiperiodics, and evacuants, have all been used with varying success. Some have vaunted the success of depletion, while others have deplored the fatal effects of that measure; some have cured their patients with quinine, others by the employment of emetics. These opposing statements are only reconcilable by assuming variations in the period or characters of the epidemic. One report speaks of six hundred cases cured by bleeding; another records the cure of one thousand by emetics of ipecacuanha; a third gives uniform success to the combination of quinine with purgatives. The majority of cures have been obtained in various hands by emetics; but the commissioners observe that it cannot yet be asserted that ipecacuanha is the specific remedy for sweating sickness.

MEDICAL SOCIETY OF PARISIAN HOSPITALS.

September 26th, 1851.

Injurious Effects of Camphor administered in an Enema.

M. ARAN has communicated the following case to the Medical Society of Parisian Hospitals, and has been induced to do so because the dose that he has here employed, and which had given rise to serious symptoms, is that which is recommended in the formulæ of modern therapeutic works.

A young woman, aged twenty-seven years, was admitted into the Necker Hospital under the care of Dr. Aran, suffering from nervous symptoms of an anomalous character, neither epileptic nor hysterical, and for whom, after having employed various tonics and antispasmodics, the author prescribed an enema containing *a drachm* (four grammes) of camphor. Two minutes after the administration of the enema, the patient complained of a sense of fainting, and pain in the abdomen; she was then seized with a violent convulsive attack attended with loss of consciousness, foaming at the mouth, contortions of the limbs, the head bent backwards, the face blue, coldness of the extremities, feebleness of the pulse, and extreme distress in respiration. This paroxysm lasted twelve or fifteen minutes. The patient recovered consciousness by having cold water dashed on her face, but she still complained of a sense of suffocation, and said she was dying. After having administered a purgative enema to remove the camphor, stimulating frictions were employed on the limbs, and strong infusion of coffee was given from time to time. Nevertheless, the distress in the breathing, and the feebleness of the pulse, became augmented. The patient was then laid on a bed; the body was covered with sinapisms sprinkled with solution of ammonia, a stream of cold water being poured upon the head, while at the same time a strong infusion of coffee was given at intervals. These affusions calmed the agitation and anxiety of the patient, although she still felt the same oppression of breathing. The pulse rose a little; the skin had become reddened by the sinapisms, although she was not conscious of their application. About an hour after the first occurrence of these anæsthetic symptoms she was placed in a warm bed, and covered with warm clothing, continually renewed; she scarcely felt the warmth. The coffee was now rejected by vomiting; a cordial draught with tincture of canella was then substituted. The

skin became very hot, while the face and feet remained cold. By persevering in this treatment, the patient was placed out of danger four hours after the first appearance of the symptoms of poisoning.

SURGICAL SOCIETY, PARIS.

Sept. 11, 1851.

The Treatment of Erectile Tumours.

M. GUERSANT, with reference to the cases mentioned at the last meeting of the Society, entered upon the consideration of the treatment of erectile tumours by setons, to which M. Guersant objected that it had frequently been followed by fatal erysipelas. M. Guersant stated that MM. Blandin and Berard had also met with frequent deaths from the same cause. M. Guersant preferred the treatment by red hot needles, which he had not found attended by any ill consequences.

Cause of Death in Croup.

In allusion to the post-mortem examination of the body of a child who had died from croup, after tracheotomy, related by M. Morel-Lavallée, M. Guersant stated that he did not consider tracheotomy to be contra-indicated by extension of inflammation to the air-tubes; that in his opinion asphyxia in fatal cases does not proceed from the false membrane lining the bronchi, but from that which covers and obliterates the glottis. He had operated upon a child who for eight days passed portions of the membrane from the bronchi through the artificial opening, and ultimately recovered.

M. Morel-Lavallée observed that in the specimen he had exhibited no false membrane was found in the larynx, which was sufficient evidence that the asphyxia had really proceeded from the presence of false membrane in the bronchial tubes.

Pathology of Tetanus.

M. HUGUIER related the appearances found in the body of the patient who had died of tetanus after the operation of hydrocele, as related by him at a former meeting. The nervous centres had been carefully examined, and it was found that:—The membranes were highly injected; the cerebro-spinal fluid presented nothing unusual; there was a small quantity of reddish serosity in the ventricles; the grey substance was injected, and the white substance abounded in bloody points; lastly, the pons and medulla oblongata presented the colour of wine lees, without exhibiting any alteration in their consistence.

Aneurism of the Inferior Scapular Artery.

M. SOULE, of Bordeaux, communicated the case of a man fifty-five years of age, who had presented a tumour of five days standing, in the axilla. The tumour was punctured, and blood flowed. Before the puncture was made there were no indications of aneurism. Hæmorrhage recurred, and the patient died. On examining the body, remains of an aneurismal pouch about the size of a nut were found, situated upon the inferior scapular artery at the point where it turns round the scapula to gain the axilla.

Hospital and Infirmary Reports.

ST. GEORGE'S HOSPITAL.

REPORTED BY DR. BARCLAY,
Medical Registrar.

Severe Lesions of the Brain.

THE formation of pus is so indubitably one of the terminations of inflammation, that, in the absence of all symptoms of an acute character during life, we can only conclude that there was something in the nature of the organ which prevented the manifestation of the ordinary local signs of inflammation, and that the inflammatory action itself was of that low and ill-developed character with which the system at large does not readily sympathise. Both causes probably contributed to shroud in obscurity the commencement and course of the subjoined cases of circumscribed abscess of the brain. The nervous matter of the hemispheres has been shown to be devoid of ordinary sensibility, and no other part was here implicated in such a way as to indicate by pain the progress of the disease till probably after suppuration was complete; while we know that pus may be formed in other organs with comparatively little constitutional disturbance.

From the commencement of their illness it was evident that the brain itself was the seat of disease, but its nature was wholly unexplained by the symptoms. The one patient was at work, and the other was taking a walk, when surprised by paralysis gradually increasing, and, in one, reaching to perfect unconsciousness after a few days, with complete hemiplegia; while, in the other, it nowhere became complete, was not attended with unconsciousness, and was partial on both sides, but affecting the arms more than the legs. In neither case was there delirium or acute pain in the commencement, and, when admitted a few

days afterwards, there was no febrile disturbance; and the condition of both patients throughout was chiefly marked by listlessness, apathy, and depression. It seems to be quite an open question at what period of the illness pus first began to be formed. Perhaps other instances of softening would lead to the conclusion that the paralysis proceeded *pari passu* with the suppuration; but then what was the history of the previous inflammatory action, of which our clinical observation gives no particulars?

Circumscribed abscess very frequently takes its origin in disease of some of the bones of the cranium, communicating the inflammatory action to a limited portion of cerebral matter; but in neither of the present instances did such a cause exist; and it would seem to be utterly vain to speculate whence it arose. In the first of the two the false membrane with which the cavity was lined, and the fetid character of the pus, seem to indicate diseased action of much longer standing than the continuance of the paralysis, and was probably connected with his previous bad health; but this is not proved by the history of the case as obtained during life. The second, although also circumscribed, was not so distinctly limited, and seems to have terminated at an earlier period of the disease; yet the paralysis was of nearly the same duration in each. The first case, again, is nearly free from other complication, and seems to prove that destruction of the central portion of the cerebral structure in the hemispheres is chiefly marked by loss of power of motion on the opposite side. In the other case, too, the same circumstance was the most prominent feature, for in neither was there loss of sensation; but the inflamed state of the pia mater was in one probably the cause of delirium, which did not exist in the other. Whence, it may be asked, with some reason, in the second case, came the partial paralysis on the same side, as well as the more severe palsy on the opposite side to that where the lesion of the brain existed? It must be confessed that we have much yet to learn concerning lesions of the brain, which the accumulation of facts may, in course of time, aid us in acquiring.

Wm. M'G., æt. 35, was admitted into St. George's Hospital, under the care of Dr. Wilson, on the 27th February, 1849, presenting much of the cachectic and emaciated appearance of a person suffering from tubercular disease, with the ends of the fingers clubbed, and stating that he had suffered from cough for several months, and had spit a good deal of yellow phlegm; that he had been so much enfeebled as to be unable to continue at work; but that,

on the 20th instant, when taking a walk for the benefit of his health, he first felt a numbness of his right arm and leg; that he continued gradually to lose the power of motion in these limbs till the 24th, when he had a fit with partial loss of consciousness, lasting from 4 to 7 A.M. Since then all power of motion of the affected side had been entirely lost, but sensation remained perfect, and had been unaffected throughout. At the time of his admission he was completely hemiplegic, and he was suffering from pain in the head; the tongue was clean, bowels open, and pulse pretty natural; his cough had not troubled him much latterly, and his intellect was quite undisturbed. Cupping glasses were applied to the back of the neck, and ten ounces of blood drawn. Five grains of calomel, followed by a senna draught in three hours, were administered at once, and he was directed to have a draught containing half an ounce of the compound decoction of aloes twice daily.

Next day, as the pain was more severe, twelve leeches were applied to the temples, followed by cold lotion, but with no relief. A blister was then placed behind each ear, the purgatives were repeated, and free evacuation of the bowels secured by enema.

On the 4th March he was complaining a good deal of sickness, but without vomiting; the pulse was feeble, and he was excessively low and depressed; the pain of the head continued unabated, and he was ordered to have one drachm of the solution of corrosive sublimate in pimento water three times a day, and two ounces of wine daily; and, as the sickness continued, he next evening had some brandy. There was throughout no inclination to coma, but he was listless and depressed. He had no return of power at all in the arm or leg, nor were any convulsive movements observed. The pain of the head continued to the last. He sank very gradually, and died on the afternoon of the 10th.

Post-mortem examination twenty-three hours after death.

Body well formed, but thin.

Cranium.—The sinuses of the dura mater and the meningeal vessels were partially distended with blood, and the free surface of the arachnoid was unusually dry. The convolutions of the brain were externally flattened, especially towards that portion of the left hemisphere corresponding to the parietal fossa, where the substance of the brain was of a greenish colour, and much softened. At the depth of a quarter of an inch below the surface, corresponding to this discoloured portion, there was a circumscribed abscess, nearly the size of a

small apricot: it was situated above and to the outer side of the lateral ventricle, and contained a dirty, greenish-coloured, fetid pus: the walls of the abscess were lined by false membrane, beyond which the substance of the brain for about a line in thickness was condensed, and of a blackish colour. The cerebral substance throughout the entire brain was softer than natural, but especially so in the vicinity of the abscess, where it was almost diffuent. The puncta were numerous; the ventricles contained a small quantity of clear serum.

Thorax.—The pleurae were healthy; the lungs were gorged with frothy serum, and much congested at their lower and back parts, especially on the left side, where several patches of pulmonary apoplexy were observed. The cavity of the pericardium contained about two ounces of clear serum; and there was a small white patch on the left side of the heart. The heart was small, and its ventricular parietes, especially on the left side, flabby, and much attenuated; the valves were all healthy.

Abdomen.—The stomach and alimentary canal were healthy; liver also healthy: the spleen was large, soft, and of very dark colour; the kidneys were very much congested both in their cortical and pyramidal portions—of a dark liver colour, soft, and friable; the infundibula and pelvis of the kidneys were also highly congested.

William R., æt. 32, a shoemaker, was admitted, on 5th December, 1849, into St. George's Hospital, under the care of Dr. Wilson, complaining of general loss of power in his limbs, both in the arms and legs, but apparently more severe on the left than on the right side. Relatively the loss of power was also greater in the upper than in the lower extremities, because he could contrive to limp about, and yet was unable to feed himself. According to his own statement, the paralysis had come on quite gradually, without any fit or loss of consciousness. He complained of pain affecting the left side of his head and face; his articulation was indistinct, and there was a sort of apathy and indolence about him, which prevented his making any effort to answer questions addressed to him: his aspect was very pale; pulse pretty quiet and natural; tongue coated, and red at tip; gums tender, with distinct mercurial taint of breath. He was ordered mild aperients, and an alum gargle; and after a few days' rest a blister was applied to the back of the neck; but there was no improvement of any sort,—indeed, he seemed to have less power of motion in the arm, and he occasionally complained of headache, but not constantly.

On the morning of the 13th he had

an attack of vomiting; he was low, his face much more pallid, and the apathy and indifference to surrounding objects increased, with much inclination to sleep. He was taking a draught containing half an ounce of decoction of aloes twice a day, to which three grains of ammonia were now added. From day to day he became more feeble, and stimulants were given without effect.

On the 17th his mind began to wander; his pulse had become more frequent and feeble; his tongue white, the mercurial effect having passed off; his face very pale, not anxious, but rather void of expression, and slightly drawn to the left side. Grey powder was now given; but next day the delirium had considerably increased; the skin was hotter; pulse quicker, but very feeble; sordes began to collect on his lips and teeth; he was unable to articulate intelligibly, or to protrude his tongue; and from this gradually sunk into a state of stupor, becoming comatose, and dying on the afternoon of the 20th.

Post-mortem Examination twenty-four Hours after Death.

Body well formed, and in good condition.

Cranium.—The membranes of the brain were healthy. At the upper and outer part of the right hemisphere there was observed superficially a depressed spot of about the size of a shilling: beneath this, the grey, and also the white substance of the brain, were found to be softened, leaving a small cavity, the edges of which were irregular and eaten away, like the edges of an ulcer. The pia mater covering this and the neighbouring portion of the brain, as well as the substance itself, were more vascular than natural, and presented a delicate pink tinge. Another softened portion, of about the same size, and presenting a similar depression on the surface, was found at the lower part of the middle lobe of the right hemisphere. The ventricles were dilated, and filled with serous fluid. All the remaining portions of the brain were healthy, the septum lucidum and fornix being of firm texture.

Thorax.—The lungs were somewhat congested posteriorly; the heart healthy.

Abdomen.—The stomach and intestinal canal presented no remarkable appearance; liver and spleen healthy; the kidneys were large, much congested, and the capsules very adherent; their surfaces were rough and granular.

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HÔPITAL DE LA CHARITÉ, PARIS.

Case of Deviation of the Abdominal Aorta, and Hypertrophy of the Heart, produced by an Hydatid Cyst of the Liver.

A WOMAN, sixty years of age, was admitted on the 24th of April, said to be suffering from an enlargement of the heart, congestion of the liver, thoracico-brachial neuralgia, bronchorrhœa, anæmia. M. Piorry had suspected narrowing of the aorta, but the want of any positive symptom had left this a bare suspicion. The patient gradually got worse, and died on the 2d of June.

Post-mortem examination.—The heart was affected with what is usually called concentric hypertrophy by pathologists: this concentric appearance, however, M. Piorry regarded as the consequence of the slowness of death, and considered that, if death had occurred suddenly, the heart would have been found dilated. Repeated experiments on dogs, the professor stated, had confirmed his views with regard to the nature of concentric hypertrophy of the heart.

The bronchi, filled with an abundant frothy mucus, justified the diagnosis of bronchorrhœa. This, and not the disease of the heart, was the cause of death, by the production of asphyxia. M. Piorry observed that hypertrophy of the heart is always the result of an effort to overcome some obstruction to the circulation, and this obstruction may be a narrowing of the orifices of the heart (which did not exist in the present instance), or of a tumour compressing the large vessels. A large abdomen is almost always the cause of hypertrophy of the heart, because the circulation in the large vessels is obstructed. Tall, thin people, also, M. Piorry alleged, have almost always hypertrophied hearts, because they are affected by a general narrowing of the vessels. M. Piorry was somewhat surprised at not finding all the conditions which he had thus laid down as the cause of hypertrophy, when, on raising the liver, he perceived two tumours—one small, and the other the size of the fist. The first appeared, on superficial examination, to be of a carcinomatous character; the second, which had absorbed the Spigelian lobe, was prominent, rounded, formed of a principal whitish and cartilaginous envelope, inclosing a white granular liquid; and secondary envelopes, grey, elastic, and ovoid, inclosing round, transparent, tremulous tumours: these were hydatids containing echinococci. This tumour, it was found, had compressed the aorta, and caused it to deviate to the left, while at

the same time the renal arteries were elongated.

The difficulty of the diagnosis of so deeply-seated a tumour was obvious, although it might have been possible to detect it by percussion and auscultation. The tumour, M. Piorry considered, had probably existed some time. He pointed out the extent of its interference with the circulation, and its production of bronchorrhœa by causing congestion of the organs.

Correspondence.

THE LONDON GRINDING SYSTEM AS THE GRAND OBSTACLE TO SOUND MEDICAL ACQUIREMENTS.

SIR,—I perceive in one of the leaders of your last week's Journal, an account of some late resolutions of the Court of Examiners of the Company of Apothecaries, having reference to the preliminary education of students intending to qualify themselves at the Hall.

On these resolutions and on other subjects connected with them, I should like to offer some observations, if you will kindly allow me the space necessary.

You observe, sir, that this act of the Apothecaries' Company "is a step in the right direction," and with this opinion I of course cordially agree; but at the same time I must protest, that the step is the shortest possible step, and but a mole-heap, compared to the mountain of improvement that requires to be raised.

The Examiners affirm, "that the great obstacle to the acquirement of sound medical knowledge is the general want of preliminary education among the pupils, and that until this serious defect is removed the progress of medical science will be retarded." Now, sir, although I willingly admit that a liberal preliminary education is a good thing, and that the above declaration of the Hall examiners has a certain foundation in fact, I cannot admit that the deficiency assumed has had much to do with the retardation of sound professional knowledge amongst young medical men; I am rather convinced that the method pursued by most students in obtaining the information necessary to pass the Hall is such as to render their medical acquirements too deceptive for examiners to come to any certain conclusions on the matter.

The cause of this deception rests in the prevalence of that most iniquitous practice, the *London grinding system*, and the success of this system rests mainly upon the errors of the examining court itself.

In the pages of your Journal for April

19th, 1844, there appeared, sir, a bold and admirably written leader, in which the grinding system as it then existed was fully exposed, its iniquity laid bare, and the causes of its success explained. That leader I chanced to read some months ago, and thinking it might not be unimportant to ascertain thoroughly what was the extent of the grinding system in these days, I have made it a point ever since to enquire into the matter, with intent always of exhibiting this monstrous fraud to boards of examiners and to the world at large. The present declaration of the Apothecaries' Company affords me an opportunity of carrying out my purpose.

And, at the outset I would observe that since the date of the leader referred to (1844), the grinding system instead of falling into disgrace, has gone on, in a steadily progressive manner; that it is now more perfectly organized than ever, and never was practised more successfully than at the present hour.

The writer of 1844 speaks of a certain grinder, who so excelled in his art, "that he knew to a nicety when each of the subjects who committed themselves to his care was in a fit state for presentation; just as the feeders of geese at Strasburg know to a tittle when each animal's liver is in proper state to be made an element in the celebrated *Paté de fois gras*." But the profession of grinding then practised only by one or two has been found so lucrative that at the present time at least half a dozen professors live by this most iniquitous use of their acquirements. At the period already named, the knowledge of the grinder as to the kind of information which the student must have, seems to have been very great, "he even knew the proper answer for each examiner:" at the present moment knowledge in this direction is, if possible, still more perfect. To use the common and very expressive phrase, "these examiners are all gauged;" the peculiar mode of questioning used by each is known; the subjects on which he usually examines are familiar, and in many instances the very questions as they will be asked, verbatim et literatim, with the proper answers required, are indicated. "Gentlemen," says one of the most successful of these crammers in addressing his class, "allow me to drill you well on the ointments, for with Mr. So-and-so for an examiner you might find this a plucking subject."

The most remarkable names are also given to the examiners, to fix more firmly in the mind of the pupil their several peculiarities: thus one gentleman is famous for examining on the blood, and receives in consequence no very polite cognomen. "Gentlemen," cries the grinder, "with Mr.

So-and-so the blood is a plucking subject; you must know the blood. He will commence with mastication, and drag you through all the process of blood-making, according to his own crotchets: above all things, therefore, (if he is your examiner,) declare to him that the saliva is of great importance, that pepsin is invaluable, and that the thoracic duct is the only channel by which the prepared food gets into circulation: remember these points, gentlemen, I pray you! and particularly remember the pepsin!"

Again, if a new subject be started at some sitting of the Court, the innovation on the routine of the grinder is immediately noted, and forthwith he is fortified on this as well as on all other ordinary subjects. This fact was ludicrously exemplified a little more than a year ago. The illustrious Liebig had announced a new test for prussic acid: this test was made the subject of a question at an examination in the University of London; and one night an examiner at the Hall, in humble imitation, poured it on to the quivering tympanum of an unhappy student. The following morning saw the large grinding class in which this young gentleman had *studied*, in a state of unutterable consternation, lest the beaten track was to be abandoned, and the cramming they had undergone to be of no avail. But the chief of the grinding class now appeared, and soon threw brightness about him like a sunbeam. "Gentlemen," he exclaimed, "this is indeed something new; but never fear! those examiners I assure you are no match for me; wherever they go I can follow, and what is more, *I can drag you along with me*. Here is the test fully described for you; write it down word for word as I say it, and let every one of you repeat it at least twice daily, until such time as you go up, for it is a fresh subject, and is sure to have a considerable run."

If a new examiner is appointed, he is at once made the subject of particular observation, and his line of action ascertained. First, it is learned whether he follows any particular branch of the profession, or has written on any particular subject, and if so, this is put down as being likely to influence him at the examiner's table. Secondly, every candidate is requested, "*for the good of the class*," carefully to indicate all the subjects on which the new examiner exhibits his learning; and so in a brief period is the just terror in which the examiner should be held most effectually removed; he is "*gauged*" and filed off.

From a knowledge of examiners the grinder leads his pupils to a knowledge of things; not a new bottle or preparation finds its way to the examin-

ing tables that has not almost simultaneously its counterpart on the table of the grinder: "Gentlemen, at the Hall they will show you this bottle; mark its appearance, and observe that when it is shaken the substance within gives out a metallic ringing sound; only look at this specimen well *here*, and you will be sure to know it well *there*, for the two are precisely similar."

Your leader seven years ago, sir, well exposes the botanical part of the Hall examination. "The young gentlemen who in the fields would have been puzzled between a nettle and a dock, had the story all pat; natural order, sexual position, class, genus, species, name, habitat, nothing was wanting; but the uniformity of the extent of botanical knowledge begat suspicion, and it was by and by discovered that the specimens paid toll of branch and blossom each on its passage thither" (to the Hall). At the present day the same system of fraud exists in all its fullness: still may every candidate for the Hall license, for the small sum of half-a-crown, have a packet of specimens exactly like those sent to the examination tables, each flower duly labelled and described; perhaps, indeed, the thing is done even in better style now than it was formerly, for the cunning botanist, anxious that the lovers of Linnæan science with whom he speculates should not betray the secret by knowing too much, either avoids giving "the full complement" or else perpetrates an intentional mistake on one of the labels. Thus charged with botanical lore, the student boldly meets the enemy, daring even to walk to Blackfriars with the Chelsea bouquet in his button-hole, and to sit with it, labels and all, in his breast pocket, side by side with his examiner.

Still further; the professors of cramming know their evil art so perfectly, that they are able to apprise their pupils of the very disposition of each examiner, and of the behaviour that will best suit him. "If you get Mr. A., gentlemen (whom you may at once recognise by such and such peculiarities) you may rest pretty easy in your minds, he is very kind and gentlemanly, and is always unwilling to reject any man who knows his Pharmacopœia; look well over that book, then, and always remember that the subjects in it come alphabetically; so that in searching for anything to which he shall direct your attention, you may be able to open upon the right place with the air of a person who is familiar with the learned volume in question, and understands it from its alpha to its omega. If you get Mr. B. you will find him strictly practical, so be sure to narrate all the cases you have seen, and especially midwifery cases. If

you get Mr. C. you will find him pettish, very fond of putting catch questions, as the *Latin* derivation of hæmoptysis (a word you will remember really derived from the Greek); he will also make a little fun of you perhance, and tell you that you know no more of your profession than a governess or a washerwoman: well, these mere insults you must suffer resignedly, as there is no escape from them except by the way of rejection, which is not desirable, and you will then get on so as to pass with him also: only take care, by the way, not to admit to this gentleman that you studied in Scotland, if such be the case, for he has a most sneering antipathy to all medical schools and professors on the other side of the Tweed, and would like if he could to pluck you for the very admission." Thus, one after the other, does the grinder describe the whole examining board, *in truthful style*.

The sum, sir, that the pupil has to sacrifice for this grinding advantage, or rather disadvantage, is five pounds, and it is understood that for this sum the grinder *shall* get him through: thus may the pupil be ground and rejected, ground and rejected; as many times as he pleases, he is no worse, except that he loses time; the grinder bears all the trouble. The mode in which the grinding class is conducted also is of the most artful kind: the pupil is always at the "commencement of the course," join when he may; the subjects being taken up in such a manner as to form a circle safely perambulated in no more than three months. "Keep to this circle, gentlemen," says the grinder, "and you are safe, for it girths fairly the body medico-intellectual of Apothecaries' Hall."

The rapidity with which the grinders cram their pupils is incredible: young men who would confound a voltaic pile with the pile of a bridge, or the scales of leprosy with the scales in libra, are in the course of a few weeks, by constant daily repetitions, made to go through decompositions that would take a Berzelius months properly to understand, and to rattle off the symptoms of diseases like consummate nosographers. Still more, the system is managed so adroitly (especially by the older grinders), that there is no telling either by cross-examination or any other means that the answers are ground ones; the student seems to know the whole subject perfectly, and yet all he utters is a mere mechanical act of the lip, in which reason and thought play no part; and so flimsy is the knowledge, that to break the chain of repetition for two days is to go back as many weeks.

But to cram the deceived wretch in this way is not the only part of the grinder's business; he has also to watch for the

exact period for sending him to the examining board; and the proper moment for this he understands so well, that in *ninety-nine cases out of the hundred* the man he thus sends shall pass. It may be, however, that the pupil must go up before his hour of maturity in *grinded* lore shall have come, in which case he is taught an almost neverfailing method, that, viz., of shirking his weak points, and of quietly parading his strong ones, for it is part of the grinder's creed, "that gentlemen pretty well up on one or two subjects, may by a little dexterity avoid all appearance of ignorance, and that generally speaking it is the student who leads the examiner into different subjects, not the examiner the student." Again, if the candidate is weak on all points, he is taught to employ his time until the evil day arrives in getting up his Latin, and those subjects which are usually preliminary and most common; that is to say, he is instructed to take the edge off his examiners by a large display at first, with some plausibility afterwards, and such a man is said "to have a chance of getting through *with a squeeze*," and often does so. Lastly, if a student goes up against the will of the grinder, *he is always rejected*, and the grinder tells him that he would rather have returned him his money than have had his class disgraced by such impatient folly; and this in fact would be better for the grinder, since he must himself bear all the load of the dishonour: for, as your leader of 1844 observes very rightly, "It is the business of these gentlemen to get the student through, rather than his own; if they fail, the blame attaches to them rather than to him, and in this light is the thing actually viewed. It is not said, that Mr. So-and-so was plucked last night, and that Messrs. So-and-so passed; but it is, one of Power's men, or one of Steggall's men was plucked last night, and seven or more of Power's or Steggall's men passed."

But, sir, there is a more grievous evil in connection with this system than any I have yet narrated, and it is this: so certain is the grinding process in its results, and so common has it become, that good and worthy students are entrapped into the habit of adopting it. To speak plainly, they are almost driven to adopt it; for, so accustomed are the examiners to receive the prepared and mechanical answers of ground men, that they can listen calmly to no other. They are like some epicures, who from long custom get to loathe all food that does not come to them dressed after a certain system. "Sir," says the grinder to his really intelligent pupil, "you know your profession excellently well, but you do not know how to answer questions in Hall fashion. I must beg you, therefore, in your

descriptions to avoid giving an account of things in the same unclassified way that you have seen them, and to follow me in what I say." "But, sir," remarks the student, "what you say is sometimes incorrect; I know that your answers are not always in accordance with facts, or up to the knowledge of the present day." "Never mind," replies the grinder, doggedly, "mine is the *Hall way* at all events, and as you are anxious to get the Hall diploma, it will be wise for you just to cast off your own views, *pro tem*, and to content yourself with mine." Such is the grinding method: how true is the writer before alluded to, when he exclaims, "Oh! it is a vicious and unworthy system; it is a cheat and a lie."

And, sir, when I affirm that nine out of ten of all the students who go up to the Hall for examination pass through this debasing ordeal, how, I ask, can the examiners of the Hall affirm with any approach to truth, that candidates for their diploma are worse informed in matters of preliminary than of medical education? A student appears before them, with his head charged like a bomb; the whole medical information of the eleven examiners, as far as it can be known, thrust into that one unfortunate cranium, with *et ceteras*. The examiner commences with Latin, but the mind of the candidate is too deeply occupied with nosology, toxicology, and chemical decompositions, to remember much of the language of Cæsar. He may have known it pretty well once, but now *hic et hæc* are lost in, or confounded with, *icandous*, *ite and ate*; and so after considerable bungling, the examiner, greatly disgusted, has to take him on to other subjects; and now the time of action comes, and the bomb bursting scatters around such stores of condensed learning, that the examiner stares, unable to comprehend how so Latinless a mouth could pour forth such torrents of medical information. The conjurer, in fact, in extracting bushels of feathers from an empty hat, does a small wonder in comparison; yet such a student when he returns to obtain his license, shall receive from the president "the compliments of the court," coupled, however, with the gentle hint, "that it would be well for him to acquire a little more Latin, if it were only for the purpose of being able to teach the rudiments of that fine language to the young olive branches that at some future period may bedeck his table." Alas, poor president, and innocent court! little do they think that the knowledge they would compliment has already no existence; that the medical contents of that surcharged head were scattered, as delivered, to all the winds of heaven,

and that the little Latin which they criticise is almost the only thing which the now emptied candidate retains; except, perchance, a recollection of their compliments, and these only to laugh at, and relate for sport on jovial occasions.

Or to take another view: a candidate for the diploma, who has been too proud to debase himself with "the grind," and who trusts to good practical and general information, goes to the examination table. Questions are there put to him on subjects which he knows intimately; but his answers he finds do not suit—they are not *ground* answers, and so he gets uneasy and uncollected, and after being tantalized for a long time, is dismissed,—not rejected perhaps, but feeling degraded to the last degree, his whole soul smarting with a sense of insult, and his tongue declaring that if he has deserved the cruel treatment he has received he has not deserved the license, or that if he deserved the license he did not deserve the degradation to which he has been subjected. These, sir, are no overdrawn pictures, the statements I make are based on painful facts, and knowing them to be true, again I ask how under such a state of things is it possible for the Hall examiners to pronounce on preliminary and medical education? They hold councils it is true, and pass judgment on candidates for their license; but really and truly, as matters are carried on, they have no more knowledge of the actual available medical acquirements of those whom they examine, than they have of the theological acquirements of the Grand Lama of Thibet.

The thing is plain: before the value of preliminary education can be brought out, *this grinding system must be abolished*: the latter nullifies the former. What matter is it to the public, if a young man who on leaving his school or his home, can speak Latin like Cicero, Greek like Demosthenes, or work out mathematics like Euclid?—what is all this to the health-seeking public, if the same young man is afterwards licensed to treat disease, with no further knowledge of the principles on which disease should be treated than he has acquired in three months with a grinding master? Is walking Southampton Street or Exeter Hall what the public understand by walking the hospitals? Will the compact knowledge of all the professors of grinding in London, transfused with something more than hydraulic pressure into this classical young man's brain, help him afterwards in restoring by skilful services glad hearts and laughing eyes to children threatened with orphanage, or in returning the dying babe, full of life, to its mother's heaving bosom? Alas, n! the

practitioner thus qualified in nineteen cases out of twenty fails in all his duties to society, mostly continues a very quack, a cheat both to himself and to the world, and though by habit he may get into a way of treating disease, yet does he never advance; his so-called experience but confirming him in the errors with which he had started in his career.

But it may be asked, how are these evils to be remedied? I answer, by a change in the whole system of licensing men as medical practitioners. It has been said to me that grinders will ever exist, because, forsooth, examiners will always have peculiarities; and, indeed, it must be admitted that men will ever ride hobbies; but surely it would not be difficult, by *increasing the number of examiners and changing the men*, so to increase and change the hobbies as to baffle even a grinder. The root of all the mischief in truth rests in the fact that *these examiners are too few in number*, and that *they hold their offices too long*. I write with all deference to these gentlemen, and would not willingly offend them; but truth compels me to ask, is it not a grievous thing that by far the most numerous portion of the public should have to depend for persons into whose hands to commit their dearest lives, on the judgment of eleven men, "*gauged*" men withal, whose acquirements, as far as examinations are concerned, may be learned and successfully taught in twelve months, by any clever fellow who chooses to turn his talents to so unworthy a purpose? Is this reasonable,—just? a thing worthy of a liberal and most useful profession?

We medical men chide the public for patronizing quackeries, from homœopathy downwards, and in this we act properly; but well would it be for us at the same time one and all to combine for the purpose of setting a proper guard over the portals which admit strangers into the temple of medicine—a guard, past which no grinder, by any subtlety, could conduct men deficient in a knowledge of the first principles of their profession.

I have thus, sir, expressed myself most freely on my subject; and I have done so, not from any animosity to the Apothecaries' Company, but for the purpose of showing how great a change must take place in the examining system generally before any good from preliminary instruction can follow. So long as examinations consist of mere question and answer, and are left to ten or twelve known individuals, examiners, however eminent, will still be *gauged* by the grinder, and ignorant men pass by the examination table into places where good men only ought to stand.

But let these examinations, sir, be conducted by many able men, chosen in turn, and frequently, from all parts of the profession—let them be examinations according to the highest standard, open to all, irrespective of the where, the when, or the how, the candidate has studied—let them be clinical and practical examinations, conducted at the bed-side, in the dissecting-room, in the laboratory; and, above all, let weeks or months take the place of the hours now occupied in examinations; and then would the grinding system die out of itself, and the public receive in all cases the substance for what is now too often the shadow of the competent practitioner of medical science.

There are, sir, many more errors in the present system of examination which might be pointed out with advantage; but already have I trespassed far too much upon your columns, for which trespass I have only one apology—the *great importance of the subject*.

I have the honour, sir, to remain,

Your most obedient servant,
OBSERVATOR.

August 27th, 1851.

Medical Intelligence.

PAYMENT TO MEDICAL REFEREES.

Resolutions adopted at a Meeting of the Faculty of Physicians and Surgeons of Glasgow, held upon the 1st of September, 1851, in reference to the Payment of Fees to Medical Referees by Life Assurance Companies.

I. THAT this Faculty has long maintained the principle that Medical Referees, the ordinary attendants of the parties desiring life assurance, ought to be suitably remunerated for their trouble in replying to the usual queries on behalf of the assuring companies; and that the parties granting the assurance ought to pay this fee, as it is obviously for their safety and guidance that such information is afforded.

II. That, in conformity with these views, the Faculty, so long ago as 1st June, 1835, passed a law, requiring every member of their body to refuse replying to these queries unless a specified fee were transmitted along with the schedule; and this law has, from that time, been steadily adhered to and acted upon.

III. That in carrying out the above views, the Faculty regret being obliged to record that, till of late, with a few honourable exceptions, they have met with the most uncompromising opposition from the

Insurance Companies, especially those of more early establishment; and although, within the last two years, several even of these have made a movement in the right direction, yet this has been so long deferred, and so obviously only a yielding to the pressure of circumstances, as to deprive the concession of much of its value.

IV. In this position of affairs it has given the Faculty much pleasure to observe some of the more recently established Insurance Companies, not only frankly acknowledging the justice of the principle so long contended for, but spontaneously offering a liberal compensation to the members of the medical profession for the very valuable information and opinions it is not unfrequently in their power to afford; and to such Companies the Faculty beg, in this public manner, to offer their best thanks.

V. The Faculty also take this opportunity of recording the sense they entertain of the important services done to the profession, in this matter of remuneration to private referees, by the editors of the *Lancet*, the *Medical Gazette* and *Medical Times*, to whose intelligent and steady advocacy, they are aware, they mainly owe whatever favourable change may have taken place in the conduct of the Assurance Companies towards the profession.

VI. The Faculty beg also to state that, whilst in 1835, in their anxiety to have the principle of remuneration established, they were indifferent as to the actual amount conceded, they now feel called upon, in justice to themselves, to intimate to the agents of all assurance companies that the Fellows of their body will not, in time coming, pay attention to any schedule of queries submitted to them with a reference to any species of life assurance, unless such schedule of inquiry be accompanied by the fee of one guinea if the sum proposed to be insured exceeds £300, and 10s. 6d. if the sum is £300 or under.

VII. The Faculty order these resolutions to be printed, and copies sent to the editors of the London and Provincial medical press, to the agents of the various insurance companies, and to the Presidents of the Royal Colleges of Edinburgh, and the other medical corporations throughout the kingdom, inviting their concurrence and co-operation.

Extracted from the records of Faculty, by
LAURENCE HILL, Clerk.

THE YELLOW FEVER AT OPORTO.

ON Wednesday, the 17th inst., notice was issued at the General Post-office that in consequence of the prevalence of yellow fever at Oporto, the contract steam-packets from Southampton will cease for the pre-

sent to touch at that port. The Oporto mails will, therefore, be landed and embarked at Lisbon until further notice.

THE CHOLERA IN THE WEST INDIES.

ADVICES from Kingston, Jamaica, up to the 31st of August, announce that the cholera is still prevalent in that island.

SANITARY MOVEMENT IN BELGIUM.

THE Board of Public Health in Brussels (*Conseil supérieur d'hygiène publique*) has decided on the holding of a hygienic congress, at the time of the next September festivals in the Belgian capital, under the presidency of M. Liedts, Minister of State and chairman of the above board. This congress, to which, besides several notabilities, the delegates of the committees of public health are invited, has for its object to determine the most necessary works for the salubrity (*assainissement*) of the towns and rural districts, and to point out practical and efficacious means for putting into practice the intentions of government. The superior board has invited the governor of the provinces to indicate the persons who would be most fit for that important and useful mission.

Every Board of Health, in every country except England, takes active and judicious steps for carrying out its measures.

SMALL-POX AND VACCINATION.

WE have been requested by the Honorary Secretary of the Small-pox and Vaccination Committee of the Epidemiological Society, to beg that all gentlemen who have received the Circular of Queries issued by the Society on those subjects, and who have not yet replied to them, will have the kindness to do so before the 15th of October. We are informed that a large number of replies has already been received, with the analysis of which the Committee is immediately about to proceed.

MEDICAL STATISTICS OF BELGIUM.

THE *Moniteur Belge* publishes a report, addressed to the King by the Minister of the Interior, relative to the population of the kingdom in the year 1850. This report completes the information in this respect for the decennial period beginning in 1841. Of the ten years from 1841 to 1850, the last exhibits the smallest number of deaths and the greatest number of marriages. The births exceed by a considerable number the decennial average; from 119,610 in 1846, and 118,106 in 1847, they have risen, in 1850, to 131,416. One point worthy of notice is the average equality in the births of twins observable during the

last ten years. The number varies generally from 2,400 to 2,700; in 1850 it was 2,667. The number of triple births was 14. The classification of deaths according to age presents no particular feature. 7 centenarian women died in Belgium in 1850, 2 in Western Flanders, 2 in the province of Namur, and one in each province of Eastern Flanders, Hainault, and Limburg. The total population of the kingdom on the 31st of December, 1850, amounted to 4,407,241. In 1849 it was 4,370,882. The increase, therefore, is 36,359.

PRIZE IN AGRICULTURAL CHEMISTRY.

THE Royal Academy of the Georgofili, at Florence, has proposed the following prize:—To determine by experiment the quality of soil best adapted to the cultivation of leguminous plants, and the relative advantages of the various manures hitherto known, chiefly those consisting of inorganic matter;—prize, 280*l*. The essays on this subject to be sent in before the end of August, 1853.

OPERATION FOR CATARACT ON A BEAR— DEATH FROM CHLOROFORM.

A SURGICAL operation under the influence of chloroform, performed at Berlin, has just terminated fatally, to the regret of the public, to whom the patient was well known. One of the brown bears in the Zoological Garden suffering from cataract of the eye, an eminent surgeon and a party of *gelehrter* assembled to undertake his cure. Bruin was tempted to the bars of his den by the offer of some bread, and then secured by ropes and a muzzle. After a stout resistance, chloroform was administered. In a state of insensibility the cataract was removed, and the bonds untied, but the patient showed no signs of life! Feathers to the nose, cold buckets of water, and bleeding, produced no effect. Poor bruin had gone whither the great tortoise, two ostriches, and the African lion have preceded him; for the managers of the Berlin gardens are decidedly unlucky. With the trifling drawback of the death of the subject, the operation was skilfully and successfully performed.—*Berlin, Sept. 16.*

OBITUARY.

DR. J. C. BADELEY.

It is with regret that we have this week to announce the death of Dr. J. C. Badeley, of Chelmsford. It appears that in order to relieve a severe attack of toothache, Dr. Badeley prepared for himself and took a dose of morphia about four o'clock on

Monday morning. Symptoms of narcotic poisoning appeared, and, in spite of the earnest attempts of many friends to save his life, he died from the effects of the morphia on Monday last at one P.M., about nine hours after he had taken it. This melancholy event has occasioned general regret, as Dr. Badeley was well known and much respected.

Dr. Badeley had occupied the office of Censor in the Royal College of Physicians. He was a good classical scholar, and an accomplished man.

Dr. Badeley delivered at the College, during the present year, one of the three annual series of lectures. These have been only recently published in our pages. He held the appointment of Visiting Inspector of the Essex Lunatic Asylums.

DEATH OF THE REGIUS PROFESSOR OF MEDICINE AT OXFORD.

DIED, on the 17th inst., at his residence, St. Giles's Street, Oxford, after a few hours' illness, John Kidd, M.D., of Christ Church, Regius Professor of Medicine, Tomline's Prælector of Anatomy, Aldrichian Professor of Anatomy, and Radcliffe's Librarian. Dr. Kidd was highly esteemed and respected, both in the University and City of Oxford. In 1800, being then a student of Christ Church, Dr. Kidd took the degree of M.A.; in 1801, that of Bachelor of Medicine; and in 1804 he proceeded to the degree of Doctor of Medicine. In 1822, Dr. Kidd succeeded Sir Christopher Pegge, Bart., in the office of Regius Professor of Medicine, to which is annexed Tomline's Prælectorship of Anatomy and the Aldrichian Professorship of Anatomy; and in 1834 he succeeded Dr. Williams as Radcliffe's Librarian. The election of a successor to the latter office rests with the Archbishop of Canterbury, the Lord Chancellor, the Chancellor of the University, the Bishops of London and Winchester, the two principal Secretaries of State, the two Chief Justices, and the Master of the Rolls. Dr. Kidd did good service in his time, as his publications testify, in various departments of mineralogical, chemical, and geological research; and about ten years ago—his last appearance, we believe, as an author—he put forth some observations on medical reform. Dr. Kidd was one of the eminent men selected under the Earl of Bridgewater's will to write one of the well-known Bridgewater Treatises; and, we believe, it has gone through several editions.

OBITUARY.

ON the 18th inst., at Cheltenham, William Briggs, M.D., late of Ambleside, formerly of Liverpool, and also of Kendal.

Selections from Journals.

THE EPIDEMIC OF SWEATING SICKNESS OCCURRING AT CASTANDET (LANDES).

BY DR. DUPOUY.

IN the month of April, 1849, an alarming rumour spread through the canton of Grenade, that a new disease, rapid in its progress and fatal in its results, had appeared in the commune of Castandet. This commune contains a population of from a thousand to twelve hundred souls. It is situated on a tolerably raised plateau; its soil is argillaceous and impermeable; it presents here and there small valleys, formed between hills of but slight elevation. The inhabitants are scattered over the district. The greater number are potters; they live almost like savages, their huts being always full of smoke from the fire, which is made in one corner without a fire-place. Their general want of observance of hygienic rules is in harmony with this state of living.

The panic was not without foundation. In the first three days twelve persons died, and several of these, within the first twelve hours of the appearance of the disease. The following is a sketch of the symptoms that were observed:—

All complained of headache, and a feeling of soreness in the limbs; all were covered with a profuse sweat; all had a full and frequent pulse; all complained of a feeling of præcordial constriction, which gave place to the most painful anxiety. Occasionally this sense of oppression was felt in the epigastrium. All experienced thirst; the tongue was moist and red. In a large number an eruption was observed, variable as to its invasion, form, course, duration, intensity, and termination; it appeared on the face, neck, and chest, and on the inside of the arms and thighs. These were the essential or characteristic symptoms by which it was known that the disease was sweating-sickness: besides these, there were various accessory symptoms. Frequently the patient was seized without any premonitory signs; generally a rigor took place, most frequently at night or late in the day. The two extremes of childhood and old age seem to have been exempt from its attacks. Nearly all the patients were from 25 to 30 years of age. Seven-tenths of the patients were females. The duration of the disease varied from four to eight or nine days, according as the cases presented or did not present the eruption. The maximum intensity of the epidemic was exhibited at its first invasion, for the deaths occurred on the first, second,

and third days. On the fourth day upwards of a hundred and fifty persons were attacked, in a population of a thousand or twelve hundred souls. The epidemic was confined to the commune of Castandet, with the exception of twelve persons who were attacked in the adjoining commune of Maurin. In the commune which it had chosen as its especial seat, it did not attack indiscriminately, but observed a course from east to west. It appeared (so to speak) like the sudden outburst of a water-spout: scarcely were five days passed from its first manifestation, and it had ceased.

To return now to the consideration of its characteristic symptoms. The *sweat* was constantly observed; it appeared with the fever. In some it was so profuse as to soak the bed linen; in others it only kept the surface of the body damp. In all it had an undefinable odour, the stronger the more abundant the sweat. The *eruption* was not so constant as the sweat, but was generally in proportion to the abundance of the latter. Only one case of confluent eruption was seen without the sweating; and that was in the case of a pregnant woman. In general the eruption appeared on the first day; in some on the second or third day. In a few cases it failed to appear, and the patients died. In a large number of cases spots resembling measles also appeared. There were generally seen minute vesicles of the size of millet seeds, white, opaque, sometimes purulent; so that by many persons it was named *white variola*. Four or five days after their appearance they lost their transparency, dried, and fell off as small pellicles. In some the period of desquamation was wanting; this was observed in those cases attended by the rubeoloid rash.

The chief point in the treatment was to favour the production of perspiration. Bleeding was tried with success at the first, but only at first. Quinine was of no service. Dr. Dupouy regards the disease as *sui generis*, and not an epiphenomenon in the course of another disease, according to Chomel's view; in the course of the epidemic now under notice, no symptoms of any other malady could be discovered.

THE OFFSPRING OF DEAF AND DUMB PARENTS.

OF about 200 deaf-mutes who attended a festival at the Asylum in Hertford last September, 103 had been or are now married. Both parties were deaf and dumb in 40 of these marriages; in 23 one could hear and speak. From the 35th Annual Report we learn that 31 of these couples "had not become parents, but the remaining 72 were the parents of 102 children, of whom 98 could hear and speak, and *four* only were

deaf and dumb. One of the four was the only child of his parents, both of whom were congenitally deaf. Besides the parents, the paternal grandfather, a sister of the father, and two sons of this sister, were deaf and dumb; and on the mother's side, an aunt of the child was deaf and dumb. In the other family, that of the three children, the father lost his hearing by disease at two years of age, and had no known relative deaf and dumb. The mother was born deaf, and had a deaf and dumb brother. These were the only cases of the kind present at the festival. The question whether the children of a deaf-mute parent are more likely than others to be deaf and dumb, has not been solved in any other country so satisfactorily as in our own. In Europe comparatively few of the deaf and dumb have married, and those we believe have generally selected hearing partners. Here, however, in the large majority of cases, both husband and wife are mutes. The percentage of deaf children, the offspring of such marriages, is undoubtedly somewhat greater than among an equal number of the children of other parents, taken like the deaf and dumb from the various conditions of life. But if the facts above stated afford a fair criterion for judging on this question, we are safe in the belief that this result might be obviated in a great degree, if *intermarriage* could be prevented between those deaf-mutes whose parents or other near relatives seem to have been constitutionally prone to the infirmity of deafness. This could only be done by moral suasion; but if influential people, and especially the parents of deaf-mutes, were deeply impressed with the idea that marriage should not take place between two persons, each belonging to a family in which the great evil of deafness was constitutional, lest the offspring of that union should be deaf and dumb, much might be done towards preventing the extension of the evil. But there are other facts on this subject which would seem, at first view at least, to confound the speculations we have based on the cases above mentioned. For instance, a husband and wife, once pupils here, were both congenitally deaf; but neither, as we believe, has had any deaf and dumb relative, except their three children, and these were all deaf from birth. The circumstances of another of our former pupils and his family connections are as follows:—His brothers and sisters hear, and they married hearing persons. One of the brothers has two deaf and dumb children, one sister has one, and another two deaf and dumb children, and one of the latter has a deaf and dumb child. There is besides one other deaf-mute in the circle of relatives, possibly more than one, though no one of the ancestors is known to

have been a deaf person. The man first referred to married a deaf and dumb woman, *and their five children all hear and speak.*"
—*Boston Medical Journal* for July, 1851.

BIRTHS & DEATHS IN THE METROPOLIS During the Week ending Saturday, Sept. 20.

| BIRTHS. | | DEATHS. | |
|-----------|-----|-----------|-----|
| Males.... | 742 | Males.... | 569 |
| Females.. | 785 | Females.. | 528 |
| 1527 | | 1097 | |

CAUSES OF DEATH.

| | |
|--|------|
| ALL CAUSES | 1097 |
| SPECIFIED CAUSES | 1095 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 305 |
| <i>Sporadic Diseases, viz.—</i> | |
| 1. Dropsy, Cancer, &c. | 51 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 130 |
| 4. Heart and Bloodvessels..... | 37 |
| 5. Lungs and organs of Respiration | 122 |
| 6. Stomach, Liver, &c. | 54 |
| 7. Diseases of the Kidneys, &c. | 10 |
| 8. Childbirth, Diseases of Uterus, &c. | 16 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 8 |
| 10. Skin..... | 3 |
| 11. Premature Birth | 36 |
| 12. Old Age | 38 |
| 13. Sudden Deaths..... | 5 |
| 14. Violence, Privation, Cold, &c.... | 33 |

The following is a selection of the numbers of Deaths from the most important special causes:

| | | | |
|--------------------|----|------------------|-----|
| Small-pox..... | 23 | Convulsions..... | 41 |
| Measles..... | 13 | Bronchitis | 48 |
| Scarlatina | 41 | Pneumonia | 47 |
| Hooping-cough | 19 | Phthisis | 144 |
| Diarrhoea..... | 97 | Lungs | 11 |
| Cholera..... | 7 | Teething | 11 |
| Typhus..... | 67 | Stomach | 6 |
| Dropsy | 17 | Liver..... | 9 |
| Hydrocephalus | 31 | Childbirth | 9 |
| Apoplexy | 26 | Uterus | 4 |
| Paralysis | 24 | | |

REMARKS.—The total number of deaths was 83 above the average mortality of the 38th week of ten previous years. Cholera is decreasing, there having been only 7 deaths from this cause instead of 28, 19, 28, 17, 17, in the five preceding weeks. There have been fewer deaths also from Diarrhoea during the past week.

METEOROLOGICAL SUMMARY.

| | |
|---|---------------|
| Mean Height of the Barometer | 30.190 |
| „ „ „ Thermometer ^a | 57.3 |
| Self-registering do. ^b Max. | 0.0 Min. 42.6 |

^a From 12 observations daily. ^b Sun.

RAIN, in inches, 0.0. — Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was about that of the monthly average.

ADVERTISEMENTS intended for insertion in the GAZETTE should be addressed to the publishers, Messrs. LONGMAN AND Co., 39, Paternoster Row, London.

THEATRE of ANATOMY and MEDICINE, ADJOINING ST. GEORGE'S HOSPITAL, No. 1, Grosvenor Place.

SESSION 1851-52.

Introductory Address—Dr. Sibson, F.R.S., October 1st, at Half-past Two.

Anatomy and Physiology—Mr. Lane, Mr. G. E. Blenkins, and Mr. J. R. Lane.

Descriptive and Surgical Anatomy—Mr. G. E. Blenkins and Mr. J. R. Lane.

Practical Anatomy—Mr. F. Godrich and Mr. H. Lane.

Chemistry—Mr. Rodgers.

Medicine—Dr. J. Bampfylde Daniell and Dr. Sibson, F.R.S.

Surgery—Mr. Pilcher and Mr. Smith.

Botany—Dr. Lankester, F.R.S., F.L.S.

Practical Chemistry—Mr. Rodgers.

Materia Medica—Dr. Lankester, F.R.S., F.L.S.

Midwifery—Mr. Bloxam.

Medical Jurisprudence—Mr. Warder.

Fee for attendance upon all Lectures required by the various Medical Boards, Forty-two Guineas.

For further particulars apply at the School, 1, Grosvenor Place; or at the residences of the different Lecturers.

MEDICAL SCHOOL. ANDERSON'S UNIVERSITY, GLASGOW.

The WINTER SESSION will begin on Tuesday, November 4, 1851. Lectures will be delivered daily for six months, on the following branches of Medical Science:—

Anatomy, Descriptive and Physiological—Dr. M. S. Buchanan.

Anatomy, Demonstrative and Surgical—Dr. M. S. Buchanan. (Demonstrator—Dr. George Buchanan.)

Principles and Practice of Surgery—Dr. Hunter.

Principles and Practice of Medicine—Dr. A. Anderson.

Institutes of Medicine—Dr. E. Watson.

Materia Medica, Pharmacy, and Dietetics—Dr. Easton.

Chemistry—Dr. Penny.

Practical Chemistry—Dr. Penny.

Midwifery and Diseases of Women and Children—Dr. Paterson.

Medical Jurisprudence and Police—Dr. Crawford.

Natural Philosophy (thrice a-week)—Dr. Taylor.

Mathematics—Mr. Laing.

Summer Courses of Anatomy, Midwifery, Chemistry, and Botany, begin in May.

Botany—Mr. Bell.

Fee for each Class, £2. 2s. Perpetual, £3. 3s.

Certificates of attendance on the above Courses are received by the Universities of Oxford, Cambridge, London, Aberdeen, and St. Andrew's; by all the Royal Colleges of Surgeons in Great Britain and Ireland, by the Faculty of Physicians and Surgeons in Glasgow; and by the Army, Navy, and East India Boards, and the Apothecaries' Company.

Students attending the Medical Classes have the opportunity of witnessing the practice of the following Hospitals, viz.:—Lying-in Hospital, 10s. 6d. for six months; Eye Infirmary, £2. 2s. for six months; Royal Infirmary, £7. 7s. for two years, including Medical and Surgical Clinical Lectures, which are delivered four times weekly. The patients admitted to the Eye Infirmary average 900 annually; those admitted to the Royal Infirmary, nearly 3000; besides 6000 out-patients treated at the Dispensary. Average number of Surgical Operations, 120 annually.

The Saloon for dissection, which is free to those attending either of the above Courses of Anatomy, is open from nine A.M. to four P.M.; and

attached to it there have been opened a Reading-room and Museum, for the use of the Anatomical Students.

The new and extensive Laboratory of the Institution, fitted up expressly for gentlemen desirous of pursuing Practical and Analytical Chemistry, is open daily from eleven till four o'clock. No charge for apparatus and materials in the Class for Practical Medical Chemistry.

The University Museum, a splendid collection of specimens of Natural History, including more particularly those of Zoology, Geology, Mineralogy, and Antiquities, is open to all Students attending the University.—A valuable Medical Library is also attached to the Medical School.

LEEDS SCHOOL of MEDICINE. TWENTY-FIRST SESSION, 1851-52.

PLAN OF LECTURES.

The WINTER SESSION will commence on Wednesday, Oct. 1, 1851, when Dr. Chadwick, President for the ensuing year, will deliver the Introductory Lecture, at Twelve o'clock.

Anatomy, Physiology, and Pathology, by Mr. Nunneley, Mr. Ikin, and Mr. S. Hey.

Descriptive Anatomy, by Mr. Price, Mr. William Nicholson Price, and Mr. C. G. Wheelhouse.

Principles and Practice of Surgery, by Mr. Hey and Mr. Garlick.

Chemistry, by Mr. Morley, Mr. Scattergood, and Mr. Edward Joy, Jun.

Principles and Practice of Physic, by Dr. Chadwick and Dr. Heaton.

SUMMER SESSION, 1852, commencing May 1.

Materia Medica and Therapeutics, by Dr. Clarke.

Midwifery and Diseases of Women and Children, by Mr. Smith and Mr. Braithwaite.

Forensic Medicine, by Dr. Pyemont Smith.

Botany, by Dr. Heaton.

Practical Chemistry, by Mr. Scattergood.

Operative Surgery.

Perpetual to all the Courses, £42.

** Application for Tickets may be made to Mr. Garlick, 21, Park Row.

N.B. Attendance to the above Lectures will confer the same Qualification for Examination as is obtained in the Medical Schools of London.

Clinical Lectures will be given at the General Infirmary on Medical Cases, by Dr. Chadwick and Dr. Heaton.

On Surgical Cases, at the General Infirmary, by Mr. Smith, Mr. T. P. Teate, and Mr. Samuel Hey.

On Ophthalmic and Aural Practice, at the Eye and Ear Infirmary, by Mr. Nunneley.

††† Medical Libraries are connected both with the School and the Infirmary.

THE LIBRARY of MEDICINE;

comprising a Series of Original Dissertations. Arranged and edited by ALEXANDER TWEEDIE, M.D. F.R.S. &c.

PRACTICAL MEDICINE; consisting of Treatises by Drs. Alison, Bennett, G. Budd, W. Budd, Burrows, Christison, Carpenter, Fergusson, Gregory, Hope, Joy, Locock, Prichard, Rowland, Schedel, Shapter, Symonds, Taylor, Theo. Thompson, Wm. Thompson, Watson, Williams. In 5 vols. post 8vo. price 10s. 6d. per volume, cloth.

A SYSTEM of MIDWIFERY. By EDWARD RIGBY, M.D. &c. Second Edition, 1 vol. post 8vo. 10s. 6d.

CRUVEILHIER'S ANATOMY. Translated by Dr. MADDEN; and revised by Professor SHARPEY, of University College. In 2 vols. containing 1232 closely-printed pages, and upwards of 300 illustrations, with a copious Index, &c. Post 8vo. price 18s. per volume, cloth lettered.

Whittaker and Co., Ave Maria Lane.

SAINT GEORGE'S HOSPITAL MEDICAL SCHOOL, LONDON.

The Session 1851-52 will commence on Wednesday, October 1st, when the Scholarships and Prizes awarded during the past year will be presented.

Gentlemen becoming Pupils of this Hospital may attend the Medical and Surgical Practice necessary for those who desire to become Members of the Royal College of Surgeons, or Licentiates of the Society of Apothecaries, and all the Lectures, on paying 40 Guineas at the commencement of the first year, 40 Guineas at the commencement of the second year, and 12 Guineas at the commencement of the third year. The payment for the year will admit the Pupil to all the Lectures, and to the Hospital Practice required, and for that year only.

Special entries to Hospital Practice, or to any separate Course of Lectures, may be made as heretofore.

Clinical Lectures on Medicine and Surgery are given by the Physicians and Surgeons of the Hospital, during the Winter and Summer Sessions.

Practical Chemistry is taught in the Laboratory of the School.

Practical Pharmacy under the superintendence of the Apothecary of the Hospital.

The SUMMER SESSION will commence May 1st.

SCHOLARSHIPS, PRIZES, &c.

At the end of the Summer Session, Examinations will be held for three Scholarships, of the value respectively of £20 per annum, each tenable for two years.

Examinations of all the Classes for Prizes and Certificates of Merit also take place, and Prizes given by Sir Benjamin Brodie and Dr. Chambers are awarded.

ASSISTANT-SURGEONCY IN THE HON. EAST INDIA COMPANY'S SERVICE.—A nomination to the appointment of an Assistant-Surgeon in the Hon. East India Company's Service has been placed at the disposal of the Governors of the Hospital by the liberality of Ross D. Mangles, Esq., M.P.

This appointment will be offered as a Prize to the Pupil of the Hospital School, who, entering in October, 1851, shall be most distinguished for his general good conduct, talent, and proficiency in 1854.

THE THOMPSON MEDAL will be awarded for the best Clinical Report of Medical and Surgical Cases observed in the Hospital during the preceding twelve months.

CURATOR OF THE PATHOLOGICAL MUSEUM.—A Curator is appointed annually by the Weekly Board, on the recommendation of the Medical School Council, with a salary of £50 per annum.

REGISTRARS.—Two Registrars are appointed annually by the Weekly Board, on the recommendation of the Medical School Council, each with a salary of £20 per annum.

Some of the Lecturers and other gentlemen connected with the Hospital receive Students to reside with them.

Further information may be obtained from any of the Lecturers; or from the Apothecary of the Hospital, who is authorised to enter the names of Students.

ROYAL ORTHOPÆDIC HOSPITAL, 6, Bloomsbury Square. — A Course of Lectures on the Nature and Treatment of DEFORMITIES, will be delivered at the Royal Orthopædic Hospital, 6, Bloomsbury Square, by Mr. TAMPLIN, Surgeon to the Hospital, to commence on Monday, the 13th October, at 7 o'clock, P.M. and to be continued weekly at the same hour. — For cards of admission, apply to Mr. Tamplin, at his residence, 33, Old Burlington Street, or to the Secretary at the Hospital.

HUNTERIAN SCHOOL of MEDICINE, 1, Bedford Street, Bedford Square. Established in 1822, by the late Mr. Dermott.

The Winter Session will commence October 1, with an Introductory Address by Dr. Robert Barnes, at 3 P.M.

Medicine—Dr. Aldis, F.R.C.P.

Surgery—Mr. E. A. Riadore.

Anatomy and Physiology—Mr. J. Chippendale, F.R.C.S.

Practical Anatomy—Mr. E. J. Chance, F.R.C.S.

Assistant-Demonstrator—Mr. Thomas Smith.

Chemistry—Mr. J. M. Ashley.

The Summer Courses will be delivered by the present Lecturers.

For all the Lectures required by the College of Surgeons and Apothecaries' Hall, Thirty-three Guineas; including Hospital Practice, Fifty-eight Guineas.

Apply to Dr. Aldis, 1, Chester Terrace, Chester Square; or 28, Bedford Square.

WESTMINSTER HOSPITAL SCHOOL OF MEDICINE—Session 1851-52.

The Lectures will commence on Wednesday, 1st October, with an Introductory Address by Mr. Holthouse.

Anatomy and Physiology—Mr. Hillman and Mr. Brooke, F.R.S.

Descriptive and Surgical Anatomy—Mr. Holt-house.

Anatomical Demonstrations—Mr. Burford Norman.

Chemistry—Mr. Lewis, M.A.

Medicine—Dr. Hamilton Roe and Dr. Basham.

Surgery—Mr. Phillips, F.R.S. and Mr. Holt.

Midwifery and Diseases of Women—Dr. Frederic Bird.

Materia Medica—Dr. Basham.

Forensic Medicine—Dr. Fincham and Dr. Tanner.

Botany—Dr. Radcliffe.

Dental Surgery—Mr. Clendon.

HOSPITAL PRACTICE daily, from Half-past 12 to 2 o'clock.

CLINICAL LECTURES will be delivered regularly, twice a week, by the Physicians and Surgeons. Those on Midwifery by Dr. Merriman and Mr. Greenhalgh.

General Fee to the Lectures required by the College and Hall, Forty Guineas.

A Matriculation Scholarship will be instituted, the holder of which will be admitted without fee to the Lectures and Hospital Practice required by the College of Surgeons and the Society of Apothecaries. The Examination for this Scholarship will be held on Friday, October 3. A Scholarship of the annual value of £20, tenable for three years, will be vacant in 1854, and will be awarded to the Student who shall most distinguish himself in a general examination. Further particulars may be obtained on application to the Lecturers, or to

F. J. WILSON,
Secretary to the Westminster Hospital.

GENUINE COD LIVER OIL.—

Sold by Warner and Barclay, Wholesale Druggists, 55, Fore Street, and 121, London Wall, London.

GUY'S.—The MEDICAL SESSION

commences on the 1st of October.—The Introductory Address will be given by Benjamin Guy Babington, M.D., F.R.S., on Wednesday, the First day of October, at Two o'clock.

Gentlemen desirous of becoming Students must give satisfactory testimony as to their education and conduct: they are required to pay £40 for the first year, £40 for the second year, and £10 for every succeeding year of attendance; or the sum of £100 in one payment will entitle a Student to a perpetual Ticket.

Dressers, Clinical Clerks, Assistants, and Resident Obstetric Clerks, are selected according to merit from those Students who have attended a second year.

Mr. Stocker, Apothecary to Guy's Hospital, is authorised to enter the names of Students, and to give further information if required.

ST. BARTHOLOMEW'S HOSPITAL and MEDICAL COLLEGE.

The Winter Session will commence on Wednesday, the 1st of October, with an Introductory Address by Mr. Skey, at 7 o'clock, P.M.

LECTURES.

Medicine—Dr. Burrows.

Surgery—Mr. Lawrence.

Descriptive Anatomy—Mr. Skey.

Physiology and Morbid Anatomy—Mr. Paget.

Superintendence of Dissections—Mr. Holden and Mr. Coote.

Demonstrations of Morbid Anatomy—Dr. Kirkes.

Chemistry—Mr. Stenhouse.

SUMMER SESSION, 1852,
commencing May 1st.

Materia Medica—Dr. Roupell.

Botany—Dr. F. J. Farre.

Forensic Medicine—Dr. Baly.

Midwifery, &c.—Dr. West.

Comparative Anatomy—Mr. McWhinnie.

Practical Chemistry—Mr. Stenhouse.

Hospital Practice.—The Hospital contains 580 Beds, and relief is afforded to 80,000 Patients annually. The In-patients are visited daily by the Physicians and Surgeons; and Clinical Lectures are delivered weekly: those on the Medical Cases, by Dr. Roupell and Dr. Burrows; those on the Surgical Cases, by Mr. Lawrence, Mr. Stanley, and Mr. Lloyd. The Out-patients are attended daily by the Assistant-Physicians and Assistant-Surgeons.

Collegiate Establishment.—Warden, Mr. Paget. Students can reside within the Hospital walls, subject to the rules of the Collegiate system, established under the direction of the Treasurer and a Committee of Governors of the Hospital. Some of the Teachers and other Gentlemen connected with the Hospital also receive Students to reside with them.

Scholarships, Prizes, &c.—At the end of the Winter Session, Examinations will be held for a Scholarship, of the value of £45 a year, and tenable for two years; and for one of £50 for one year. The Examinations of the Classes for Prizes and Certificates of Merit will take place at the same time.

Further information may be obtained from the Medical or Surgical Officers or Lecturers, or at the Anatomical Museum or Library.

THE MIDDLESEX HOSPITAL

SCHOOL of MEDICINE.—SESSION 1851-52.—The Session will commence on Wednesday, October 1, 1851, with an Introductory Lecture by Mr. Taylor, at Seven o'clock, P.M.

The Hospital has recently been much enlarged and improved, and now receives 285 in-patients. Special wards are appropriated for cases of Cancer, of Syphilis, and of Uterine Disease.

The House Surgeons, Clinical Clerks, and Dressers, are selected from among the most deserving Pupils.

Clinical Lectures, and Prizes for Clinical Study, are given by the Physicians and Surgeons.

Patients with Diseases of the Eye and of the Teeth are attended apart from the other out-patients. There is also an extensive Midwifery Department open to the pupils.

Fee for Eighteen Months' Medical, and Three Years' Surgical Practice, £30.

Terms of attendance on the Hospital Practice and Lectures for the periods required by the College of Surgeons and Apothecaries' Company, £75. This sum may be paid by instalments of £30 at the beginning of the First Session, £30 at the beginning of the Second Session, and £15 at the beginning of the Third Session.

For further information, apply to Mr. De Morgan, Treasurer to the School, at the Hospital, daily, from One to Two o'clock; to Dr. Corfe, the Resident Medical Officer; or to Mr. Shedden, Secretary of the Hospital.

KING'S COLLEGE, LONDON.—

MEDICAL DEPARTMENT.—The WINTER SESSION, 1851-2, will commence on Wednesday, October 1, 1851, on which day all Students are expected to attend the Introductory Lecture, by Professor William Bowman F.R.S. at Two o'clock.

The following Courses of Lectures will be given during the Session:—

Anatomy, Descriptive and Surgical—Professor Richard Partridge, F.R.S.; Demonstrators, Henry Lee, F.R.C.S., Henry Hyde Salter, M.B., and John Wood.

Physiology and General Morbid Anatomy—Professors R. B. Todd, M.D., F.R.S., and W. Bowman, F.R.S.

Chemistry, Theoretical and Practical—Professors W. A. Miller, M.D., F.R.S., and John Bowman, Esq.; Demonstrator, T. F. Hardwich.

Principles and Practice of Medicine—Professor George Budd, M.D., F.R.S.

Principles and Practice of Surgery—Professor William Fergusson, F.R.S.

KING'S COLLEGE HOSPITAL.

The Hospital is visited daily.

Clinical Lectures are given every week, both by the Physicians and by the Surgeons.

The Physicians' Assistants and Clinical Clerks, the House Surgeons and Dressers, are selected by examination from the Students of the Hospital.

One Scholarship of £40, tenable for three years; one of £30, and three of £20 each, tenable for two years, will be filled up in April next.

Full particulars on every subject may be obtained from Professor Guy, M.D., Dean of the Department; or upon application to J. W. Cunningham, Esq., Secretary.

R. W. JELF, D.D., Principal.

August 1, 1851.

CITY DISPENSARY, 76, Queen Street, Cheapside.

Notice is hereby given, that a **SPECIAL GENERAL MEETING** of the Governors of this Charity will be held at the Dispensary on Wednesday, the 22d day of October next, at 11 o'clock in the forenoon precisely, for the purpose of **ELECTING a PHYSICIAN** in the room of Dr. Manley, who has resigned. Particulars of qualifications and duties may be had at the Dispensary, or of the Secretary.

Candidates for the office will be required to attend before the Committee, at the Dispensary, on Tuesday, the 7th day of October next, at 4 o'clock p.m. precisely, to present their testimonials and qualifications, and receive the approval of the Committee, without which no candidate will be permitted to go to the ballot.

In the event of a contest, the ballot will commence at 11 A.M. and close at 3 p.m. precisely.

All votes may be given by proxy.

CHARLES F. ROBINSON, Sec.

7, Queen Street Place, Sept. 12, 1851.

HIGHLEY and SON, 32, Fleet Street, Booksellers, by appointment, to the Royal College of Surgeons of England.

Just published—

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Translated by **RICHARD PHILLIPS, F.R.S.L. and E.** With copious Notes and Illustrations. Also, a Table of Chemical Equivalents. 8vo. 12s. 6d.

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A MANUAL of HUMAN PHYSIOLOGY for STUDENTS; being a Condensation of the Subject, a Conservation of the Matter, and a Record of Facts and Principles up to the present day. To each subject are appended, in Notes. Summaries, in Rhyme, of the Composition of the Fluids and Solids, &c. By **JOHN MORFORD COTTLE, M.D.** Small 8vo.

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In a few days, price 3s. 6d.

ON NERVOUS AFFECTIONS connected with DYSPEPSIA. By **WILLIAM BAYES, M.D.**

London: C. Gilpin, 5, Bishopsgate Street Without.

UNIVERSITY of LONDON.—

Notice is hereby given, That the Second Examination for the Degree of **BACHELOR of MEDICINE**, for the present year, will commence on Monday, the 3d of November; and that for the Degree of **DOCTOR of MEDICINE** on Monday, the 24th of November.

The Certificates required must be transmitted to the Registrar fourteen days before the commencement of the Examination to which they refer.

By order of the Senate,
R. W. ROTHMAN, Registrar.

Somerset House, Sept. 22, 1851.

UNIVERSITY COLLEGE, London. FACULTY of MEDICINE.

The Classes will commence on Wednesday, October 1, when Dr. Parkes, Professor of Clinical Medicine, will deliver an Introductory Lecture, at 8 o'clock p.m.

A Soirée will be held after the Lecture, in the Library, which the friends of the College are invited to attend.

Prospectuses may be obtained at the office of the College.

Residence of Students.—Several of the Professors receive students to reside with them; and in the office of the College there is kept a register of parties, unconnected with the College, who receive boarders into their families: among these are several medical gentlemen.

The Register will afford information as to terms and other particulars.

THOS. GRAHAM, F.R.S., Dean of the Faculty.
CHAS. C. ATKINSON, Sec. to the Council.

September 1851.

CHARING-CROSS HOSPITAL MEDICAL SCHOOL, West Strand, London.

WINTER SESSION, Oct. 1851, to March 1852.

Introductory Address, Oct. 1—**Mr. E. Canton.**
Chemistry—**H. Lewis, A.M.**

Descriptive Anatomy, Demonstrations, &c.—**Mr. Canton.**

Surgery—**Mr. Hancock.**

Anatomy and Physiology—**Mr. Hird.**

Medicine—**Dr. Chowne and Dr. Rowland.**

SUMMER SESSION, May 1852, to the end of July.

Practical Chemistry in the Laboratory—**H. Lewis, A.M.**

Materia Medica—**Dr. Steggall and Dr. Willshire.**

Botany—**Dr. E. Smith.**

Midwifery, &c.—**Dr. Chowne.**

Medical Jurisprudence—**Dr. G. Birkett.**

Fee for all Lectures required by the College of Surgeons and Society of Apothecaries, 42 Guineas; without Practical Chemistry, £42.

HOSPITAL PRACTICE.

Physicians—**Dr. Golding and Dr. Chowne.**

Assistant Physician—**Dr. Rowland.**

Surgeons—**Mr. Hancock, Mr. Avery.**

Medical Practice, full period required, £15. 15s. Both Medical and Surgical, £20. 5s.

. Attendance at this Hospital and School qualifies for examination on the respective subjects at the University of London, Royal College of Surgeons, and Society of Apothecaries.

JOHN ROBERTSON, Hon. Sec.

Lectures.

CLINICAL LECTURE
ON
CASES OF GOUT,

Delivered at King's College Hospital.

BY R. B. TODD, M.D. F.R.S.

Physician to the Hospital.

[Reported by LIONEL J. BEALE, Medical
Associate of King's College, London.]

LECTURE XXV.

Case of asthenic gout with deposits of lithate of soda—early appearance of the deposits—vomiting—bronchitis—collections of pus and lithate of soda—greater proneness of the collections to form in the upper than in the lower extremities—deposits in the ears—chalk-stones—reason for viewing this as a special form of gout—some erysipelas in Pyne's case—gout in the stomach—nature of the affection—gouty bronchitis—gouty irritation of the kidney—analogous effects of gout and of erysipelas—Treatment.

THE second case of gout to which I referred briefly in my last lecture, affords many points which deserve your most attentive consideration. It is not only an excellent example of a form of disease in which the generation and deposition of lithate of soda take place in enormous quantities, but it also affords a good illustration of the symptoms which indicate that gout attacks the stomach and the bronchial tubes. I do not know that I could select a better example of the asthenic and the erratic form of gout.

The patient, William Pyne, (vol. xxxii. 1850,) has been for some weeks in Sutherland ward. His age is 43; he is a carter. It does not appear that he was at all an intemperate man in his habits, but he has been accustomed to take his daily allowance of beer, and it is not improbable that at times he indulged freely in that liquid to help him on in the labours of the day.

This man's first attack occurred so long as nine years ago, when he was only 34 years of age; this was followed by a second in six months. Since that time he has not been free from an attack of gout for three months together. These attacks were, however, slight, and did not confine him for more than two or three days: possibly they were treated by colchicum; the attack was "knocked down" (as it is said) by that medicine: however, this knocking

down did not prevent the frequent occurrence of the paroxysms, nor did it alter a character of the disease which was conspicuous in this patient from the first, namely, a tendency to shift from one joint to another. But during the last five years the attacks have been much longer in duration, lasting as long as five or six weeks.

Now it was in one of these long attacks, four years ago, that a symptom showed itself characterizing the peculiar form of gout to which this man is subject. Small deposits were observed growing beneath the skin of the ear, and about the knuckles of both hands. These deposits consisted of lithate of soda. They have increased in size and number with each subsequent paroxysm.

In November, 1848, he was a patient in the Hospital for another attack. On this occasion a very large collection of the chalky deposit formed on the back of the right hand; it was opened, and a large quantity of a white semiliquid matter escaped, looking like wet plaster of Paris. This on examination proved to be lithate of soda. In this attack other symptoms occurred of great interest, and marking this particular form of gout. He had, for instance, a severe attack of bronchitis, upon which the ordinary remedies seemed to exercise little or no influence, and which did not yield until after gout appeared in his feet. Soon after this he suffered from severe pain in the stomach and vomiting, and great flatulent distension of the stomach and bowels.

All these symptoms, however, yielded to the treatment pursued, and he left the Hospital much improved in health, after a sojourn in it of some seven weeks, and continued free from any serious attack until the 23rd of September of this year (1850), when he was admitted for an attack of gout affecting the little finger of the right hand, and the elbow of the same side. These parts were very red and much swollen, and extremely painful. The development of gout in them was preceded by a fit of shivering, and by severe pain in the stomach and vomiting. His tongue was coated with a thick fur, and his pulse 108.

The gouty inflammation spread quickly to the other fingers and to the whole hand, and an abscess formed in the little finger, from which when opened a large quantity of pus escaped mixed with a lithate of soda. The sickness increased, so that he vomited everything almost as soon as it was taken.

Under the use of small quantities of stimulants, and ammonia in effervescence, the ammonia being slightly in excess, these symptoms subsided; the fingers ulcerated

and burst, and lithate of soda was discharged in considerable abundance.

On the 30th of October, however, the sickness returned; the left hand was attacked by gout, the right continuing much inflamed and discharging, and a new symptom showed itself in some difficulty of breathing, with a very general rhonchus over the whole chest. Soon afterwards both feet and knees became affected with gout, and copious effusions were formed in the knee-joints.

On the 3rd of November, the hands and arms presented a most formidable appearance, of which I thought it well to preserve a record in the drawing which I now show you. Both hands were enlarged to nearly double their natural size, and the skin over them red and tense; a deposit of lithate of soda had formed over every joint, and in several places there were small collections discharging freely both pus and lithate of soda. The swelling extended over the forearms, and a considerable collection of matter formed near the inner condyle of the right arm.

It was observed at this time that some albumen existed in the urine, which varied in quantity, being greater when the constitutional disturbance was greater, and decreasing with the diminution of febrile excitement.

For several days abscess after abscess was formed, containing pus and lithate of soda; these were opened in succession, and while this was going on it was found necessary to administer stimulants very freely, and by giving them in small doses at short but regular intervals he was enabled to bear them, and the irritability of his stomach was relieved.

After all the abscesses had been freely opened, and the lithate of soda was discharged in large quantities, the fingers became much reduced in size, and the general constitutional disturbance quickly subsided. The catarrhal sounds disappeared, the vomiting ceased, appetite returned, and he was enabled to eat a little solid food. The joints all improved; and he was enabled to walk about the ward. The condition of his fingers became much better than before his admission, for the great masses of lithate of soda were removed, and although the fingers were stiff, they could be placed close together, and were much more serviceable than before.

Now, the first point that we may notice in this case is the accumulations of lithate of soda. These accumulations, you observe, took place about the small joints of the upper extremities, and this is most always the case. Although the lower extremities do not wholly escape, still the great accu-

mulation is in the upper ones, and the quantity found in the lower ones is generally comparatively small.

The deposit takes place in greatest abundance in the subcutaneous tissue. I shew you a drawing of a large collection of it under the skin of the elbow. It will accumulate in the areolæ of the areolar tissue; in some instances it forms a hard dense mass intersected by the bands of fibres of that tissue, but in others these bands and fibres seem to be absorbed, and a cavity is formed filled wholly with this material, from which it may be easily dislodged when the skin is freely opened. But at the same time it is found in joints, smearing the articular surfaces of the bones, and making them rough, so that, as I have often pointed out to you in Pyne's and other cases, they grate against each other; and it will make its way into the interstices of the fibres of ligaments and tendons, and stiffen them. A very common place for them is in the ear, beneath the skin covering the cartilages; and it sometimes occurs over the cartilages of the alæ nasi. Sometimes the water with which the deposit is mingled, and which gives it its soft pasty character, becomes absorbed, and a dry chalk-stone is formed which will leave a mark on a black board. Here is one of them as large as a marble, removed from one of Pyne's knuckles.

I would ask you to remark another curious point connected with these deposits: it is this, that they occur *early* in the disease. This man was under 40 when they came on, and he had not been more than five years the subject of fits of gout before considerable accumulations had formed. This fact, which I have observed in several other cases, seems to me to indicate that it is a peculiar and especial form of gout in which such accumulations take place. You will see many other cases of patients having had paroxysm after paroxysm for a long series of years without anything like such an accumulation; joints may be damaged, cartilages altered, ligaments and tendons stiffened, but the areolar tissue will be free from any collection of lithate of soda. But in such cases as that of Pyne each fresh paroxysm is accompanied by a new deposit, or a greater or less addition to those already existing. Again, in the more ordinary forms of gout, it is the lower extremities which suffer most, and to which the greatest mischief is done. In this the upper extremities are the seat of the most abundant deposits, while the lower extremities by no means escape unscathed.

Now I do not suppose that the inflammation, which in this case affected the upper extremities, reaching above the elbow, was purely of the gouty order; be-

cause we found that it ended in the formation of numerous and considerable collections pus. The tendency of gouty inflammation is not to form pus, but (and especially in this particular form of it) to generate and eliminate lithate of soda. A case of erysipelas occurred in the ward shortly after this patient was admitted, and I fear he imbibed some of the poison. Now, as you well know, the tendency of erysipelatous inflammation is, in a remarkable degree, to generate pus. Thus we had in the same subject two orders of inflammation, each tending to produce a different product,—the one the lithate, the other pus; and accordingly the collections which formed at various points were found, on being opened, to contain both of these products mixed together. In the ordinary attacks of this form of gout the newly-deposited lithate of soda is mixed with a thin whey-like fluid which contains some pus particles, and may therefore be regarded as sero-purulent.

We had a good opportunity in this case of witnessing the clinical phenomena which accompany gout when it attacks the stomach or bronchial tubes, or when it irritates the kidneys.

The symptoms which indicated that the stomach was attacked were the severe and incessant vomiting, the pain in the region of the stomach, which at times was agonising, and the tympanitic distension of the organ. When the stomach is affected with gout its mucous membrane appears to become highly irritable, and it secretes gas with great rapidity, which distends the organ. It is this great inflation of the stomach which probably (at least in great part) causes the violent pain which patients suffer under the attack; for when they are able to expel wind in considerable quantity the pain becomes much less, or disappears. But the ability to expel wind by the efforts of the muscular coat of the stomach is impaired, the power of that coat being weakened partly by the distension and partly by the influence of the gouty poison; and this very weakening of the muscular coat allows the organ to become unduly distended. Vomiting, or the expulsion of matters from the stomach, must in such cases as these be effected mainly, if not wholly, by the abdominal muscles.

There was here no metastasis, but the stomach was attacked simultaneously with the other parts. But you may often see the selfsame symptoms as regards the stomach follow the sudden suppression of external gout, or precede the development of it in the foot or some other part.

It is difficult to determine what tissue of the stomach is especially the seat of the disease. It seems most probable that the

mucous membrane is primarily, and the muscular coat secondarily affected. Post-mortem examination gives us no aid in determining this question; for the changes which we may fairly suppose are caused by the attack of gout disappear at death, and no trace of previous disease remains beyond a more or less dilated and flaccid state of the organ, and that dilatation will be greater as the attacks have been more frequent.

This case showed us likewise how the bronchial tubes become affected in gout. While the hands and forearms, and other external parts, were still suffering, the breathing became more frequent, and a tracheal sounds were heard all over the chest, and a troublesome cough came on with frothy expectoration. The very same symptoms will often be found to precede the external development of gout, or to follow its recession from some external part, just as in the stomach affection.

Lastly, we observed in this patient evidence of renal irritation, due, obviously, to the gouty state of the whole system. This was found in the presence of albumen in the urine, which varied in quantity in proportion to the degree of febrile disturbance. But the albumen, although it diminished when the patient became convalescent, did not wholly disappear; whence I infer that the kidneys must have been damaged to some extent,—probably they were in an early stage of that contracted state of kidney to which, when occurring in gouty subjects, I have given the name of “the gouty kidney.”

It is worthy of your notice that much the same derangements of internal organs which are liable to occur in gout occur also in erysipelas; and, on the supposition that this patient had imbibed some of the erysipelas poison, these derangements may have not improbably been increased by the combined influence of two poisons tending to create similar disturbances in the system. Thus the poison of erysipelas, when first imbibed, will occasion severe vomiting,—a symptom often very difficult to deal with, and sometimes causing a fatal issue to the case. So also erysipelas will cause bronchitis, which sometimes precedes, sometimes follows, any external manifestation of the disease upon the skin.

Treatment.—Now let me review the treatment to which this patient was subjected, and at the same time refer to that which seems most applicable to the generality of cases of this form of gout.

Very early in the management of this case we had to deal with the irritable state of the stomach, and the severe pain which was referred to it. The remedies on which I relied for the alleviation of these symp-

toms were, the use of opium, free counter-irritation over the epigastric region by mustard and by turpentine, and the exhibition of the sesquicarbonate of ammonia in effervescence, taking care to allow three or four grains of the ammonia to remain in excess. The opium was given at night in the shape of morphia in a night draught: it was well borne, and of signal service. I preferred giving it in one dose at night rather than in repeated doses through the day, in order to obtain sleep at the natural time. For two or three nights I combined with it a couple of grains of the acetic extract of colchicum, but very soon gave it up, as it seemed to depress. The effervescing ammonia was given frequently through the day, as often as every two or three hours; and when the erysipelatous state was at its height I was glad to add to each dose fifteen minims of the chloric ether, which is a very grateful and valuable stimulant.

At the same time we found it necessary to give brandy in small and frequent doses, and nothing seemed to remain upon the stomach better than this. At first he took two drams every hour, but it was afterwards found necessary to increase it to half an ounce. You will remember that we obtained the most obvious proof of the necessity for this kind of treatment by diminishing his allowance of brandy one day when he seemed a little improved in strength, from half an ounce *per hour* down to two drams. After he had been twenty-four hours on this reduced allowance, we found him very much reduced in strength, his tongue parched and dry, and his pulse quickened; but these symptoms very soon disappeared on putting him again on the increased allowance; and this time we gave him two drams every half hour instead of half an ounce every hour,—a mode of giving stimulants in maladies of a low kind, fever, erysipelas, &c., which you have many opportunities of seeing here attended with the happiest results.

After three days of this treatment the irritability and pain of stomach had completely yielded; but, on account of the erysipelatous state and the general depression, I judged it advisable to continue it for twelve or fourteen days, and especially when the bronchitis came on. We combated this latter affection likewise by free counter-irritation, with turpentine stupes to the chest, both in front and behind, and afterwards by a blister to the sternum.

On the 21st of November, finding all these more urgent symptoms much improved, I reduced the quantity of brandy down to four ounces in the day, and gave him bark in small quantities (five minims of Battley's liquor cinchonæ), and allowed him a little animal food, still continu-

ing an opiate at night, to relieve an irritable cough. He now improved rapidly, and on the 9th of December was able to get out of bed, and sit up for a considerable portion of the day.

It may seem to you somewhat anomalous that the treatment of a gouty state of stomach should consist in the administration of stimulants like ammonia, and such agents as brandy, the intemperate use of which, according to popular belief, tends rather to generate the gouty condition. If, you would argue, there be any state of inflammation of the mucous membrane of the stomach at all like the external inflammation which we have witnessed about the joints of his upper extremities, surely the application of such hot things as ammonia and brandy must do harm. So it would seem reasonable enough, *à priori*, to assume; but in the practice of medicine our reasoning must not be *à priori*,—we must appeal to experience; and that appeal will elicit an unequivocal verdict in favour of this plan of treatment for pure gout in the stomach, and still more if there be, as in Pyne's case there seems to have been, some complication with erysipelas. Nor is this without its analogy; for in many forms of conjunctivitis—and amongst them in that which is associated with a gouty or rheumatic state—you find great benefit from the application of tincture of opium and of a solution of the nitrate of silver to the eye.

After Pyne had become convalescent we found his kidneys not secreting sufficiently, and in consequence I ordered him to take an ounce of lemon-juice three times a day. This was followed by an immediate increase in the quantity of urine secreted from a pint to over three pints in the day; and he continued to pass water at this rate during the rest of his stay in the hospital,—not, however, free from a small quantity of albumen.

This, indeed, is the chief value of lemon-juice in rheumatic and gouty affections: it increases the quantity of the urine often in a very marked way, and it is agreeable to the taste of the patient, and more easily taken than other diuretics. It tends, therefore, to promote elimination, which is the great end of treatment in these affections, and directing that as it does through the kidneys, it does not pull down or depress in any injurious way. But I do not hold that it possesses any specific virtue over these maladies; nor do I think it prudent to rely on it alone in the acute forms: still I think the profession is much indebted to my friend Dr. Owen Rees for having called attention to the use of this remedy in these maladies, and for having sanctioned by his high reputation their employment in opposition to prejudices which we all naturally

felt against giving so much vegetable acid in maladies of which a prominent feature was the highly acid state of certain secretions.

I had been in the habit of using lemon-juice as a diuretic in dropsies of all kinds long before Dr. Rees introduced it into notice as an anti-rheumatic remedy, and in some instances with very marked benefit. I shall not readily forget one case of universal cardiac dropsy in which the use of this remedy, after a trial of most of the other diuretics, cleared off the dropsy in a few days.

You saw that we opened freely the various collections of pus immediately they were formed, and also that we opened the collections of lithate of soda. There can be no second opinion as to the propriety of evacuating by mechanical means collections of pus; but as to the collections of lithate of soda it may be a question whether it is safe or worth while to interfere with them. Now with reference to this point, you must bear this in mind,—that these collections may be small or large; the small ones generally form in positions where there is a mechanical impediment to the accumulation of the inorganic material to any very great extent; the large ones collect when the skin is more or less loosely connected with the subjacent parts. The large ones, when allowed to collect to a certain point, create inflammation and ulceration of the skin, and burst. Now I think that in many instances you may save your patient a tedious process of this kind, and, by freely incising the skin, evacuate the collection, using precautions afterwards—such as poulticing, fomenting—to guard against inflammation following the incision.

Very often you will succeed in completely evacuating these collections by this treatment without any untoward consequence; but sometimes the incision is followed by a good deal of troublesome inflammation, and even by an attack of gout. These consequences are, however, more apt to ensue where the lithate of soda has not been completely evacuated,—as when the accumulation has formed in the areola of the areolar tissue, and not in one cavity. Hence it is more prudent not to interfere with the deposit unless you can be satisfied that it is collected in a single cavity or in two or three large cavities which communicate freely with each other.

By the evacuation of several accumulations in this way, Pyne's hands are now in a very much better state than before his admission, and he can use them much better; and it will depend on the degree of improvement which his constitution will experience under a further treatment, chiefly by regimen, whether fresh accumulations will take place or not.

THE GUERNSEY ADDRESS ON HOMŒOPATHY.

To the Committee on Irregular Practice of the Provincial Medical and Surgical Association.

GENTLEMEN,—We, the undersigned medical practitioners of the island of Guernsey, beg to offer our warm congratulations and sincere thanks to the Provincial Medical and Surgical Association in general, and to you, as their Committee, in particular, for the manly and straightforward resolutions unanimously adopted at a meeting of that body held at Brighton on the 14th ultimo.

We likewise desire to express our cordial approval of the uncompromising tone of the speeches delivered on that occasion, when, in our humble opinion, the principles of truth, honesty, and morality, were enunciated, the science of medicine vindicated, and the injurious tendency of homœopathy—its hollowness, absurdity, and dishonesty—demonstrated by clear, comprehensive and irrefragable facts.

We would fain hope that the dignified manner in which the Association has responded to the movement of the Universities of Edinburgh and St. Andrew's to expose and discard homœopaths will be followed by the English and Irish Colleges, and thus enable the united kingdom to set as bright an example in checking error and upholding truth in medicine as she has recently done in religion.

We derive additional satisfaction in addressing the Provincial Medical and Surgical Association, from having throughout, firmly, advisedly, and conscientiously, resisted all attempts to induce us to hold intercourse with homœopathic practitioners, or to countenance a system the offspring of quackery, the refuge of imposture, and the nursling of dupes.

We now calmly wait the course of events, satisfied that truth and honesty will prevail, and that homœopaths who seek to be considered as regular practitioners, and pertinaciously shelter themselves under the ægis of medical institutions, will ultimately be exposed and repudiated.

We have the honour to be, Gentlemen,
Your obedient servants,

(Signed) John Manger, M.R.C.S., Eng.—S. Elliott Hoskins, M.D., F.R.S.—N. Magrath, M.R.C.S., R.N.—De Beauvoir de Lisle, M.D.—Thomas L. Mansell, M.D.—John Roberts, M.R.C.S., Eng.—R. G. Carey, M.D.—Fred. C. Lukis, M.R.C.S., Eng.—M. A. Bazille Corbin, M.R.C.S., Eng.—B. Collenette, M.R.C.S., Eng.—Martin Manger, M.R.C.S., Eng.—Polydore Tranter, M.R.C.S., Eng.—J. Baines M.R.C.S., Eng.

Original Communications.

ON THE
PHYSICAL DIAGNOSIS OF DISEASES
OF THE ABDOMEN.

BY EDWARD BALLARD, M.D.

Late Physician to the St. Pancras Royal General
Dispensary, &c.

[Continued from page 281.]

DISEASES OF THE LIVER AND BILIARY APPARATUS.—*Signs of enlarged liver*—*diagnosis of hepatic enlargement from displacement with thoracic disease*—*Congestion of the liver*—*Hepatitis*—*Abscess*—*Chronic enlargement and Hypertrophy*—*Fatty liver*—*Cancer of the liver*—*Hydatid disease*—*Cirrhosis*.

THE greater part of those diseases of the liver which are accompanied by such alterations in its anatomical characters as are cognisable by the senses during life, present *enlargement* as one of their most marked peculiarities. Whatever be the cause of the increase in bulk, to ascertain its existence is an object of special investigation with the physician.

Signs of enlarged liver.—On exposing a patient whose liver is increased in bulk to inspection, there is noticed a general fulness and augmented bulging of that part of the trunk which corresponds with its position. This of course will vary in degree, like every sign of enlargement, with the amount of increase in size. In its slighter degrees the only indication inspection affords of it may be a little more fulness beneath the margin of the ribs on the right side than on the left, but this comparison may be rendered impracticable by a distended state of the stomach. In the higher degrees of enlargement the increased prominence affects the whole of the hepatic bulge, which rises more or less above its normal level, the lower ribs are pushed outwards, the yielding being most remarkable over the cartilages, which may become everted, and the prominence of the soft wall of the abdomen may extend over the right side as low as to the pelvis. In these cases, however, the fulness of the abdomen assumes more of a general cha-

racter, from the displacement of the other viscera towards the left side. Where the intestinal canal is empty, and the patient emaciated, the eye can often trace the situation of the free margin of the organ: this is especially observable after the operation of tapping. The epigastric angle is rendered more obtuse, especially the right half, and the point of the ensiform cartilage may project forwards. The distance between the end of the sternum and the navel is in some cases increased, and the umbilical depression may be less deep than natural. When the liver is very greatly enlarged, there may be venous enlargements on the exterior of the abdomen. For the most part, enlargement of the liver produces no effect upon the appearance of the intercostal spaces, but sometimes they become more prominent, being raised to the level of the ribs. On making circular measurement of the trunk, the girth is found to be greater than natural over those parts which correspond to the enlarged organ, the right side exceeding the left beyond the usual proportion. Where, as frequently happens, the spleen is simultaneously enlarged, this difference is less evident, especially in the lower measurements. In great enlargement the descent of the diaphragm on the right side is impeded, and consequently there will be defective abdominal respiratory movement of the right side of the abdomen, of the lower, and in some cases also of the upper ribs: the lower end of the sternum will advance less during the inspiratory act. In connection with these defective movements of the right side, those upon the left will be exaggerated.

The only palpable sign of enlarged liver sometimes discoverable is a greater resistance to the hand on pressing beneath the margin of the ribs on the right side than on the left. The fulness and enlargement of the side and abdomen, visible to inspection, may be felt on sliding the hand over the surface, and when this is practised from below upwards, the edge of the hand may slip into the sulcus which marks the upper superficial boundary of the organ. Below the margin of the ribs, and at the epigastrium, there is scarcely a limit to be placed upon the extent downwards to which the resistance on palpitation may proceed, as it may occupy nearly the whole surface of the soft parietes. In some cases, assistance is afforded to

palpation by making counter pressure with the left hand applied over its situation posteriorly. Sometimes the margin of the liver can be very readily traced, especially after tapping or parturition, but in other cases much difficulty is experienced. The best mode of feeling it, after a full evacuation of the colon, is to lay the hand flat upon the surface below its supposed situation, and, after pressing rather deeply, to slide it upwards so as to bring the radial side of the index finger in contact with it. The left margin of the liver may be felt by adopting a similar manœuvre. The resistance, whatever its abdominal extent, is observed to be continuous to the margin of the ribs on the right side. When the interlobular notch is to be felt, its direction is perceived to be normal, although often its depth is greatly increased. The epigastric prominence sometimes pulsates by conduction from the aorta. The tumour from enlarged liver has little mobility. The situation of the heart's impulse may be raised by enlargement of either lobe of the liver, and the encroachment made upon the thorax is also indicated by the lessened extent downwards, to which the vocal vibration is felt. The hepatic dulness on percussion, with lessened elasticity, is noticed to extend below the margin of the ribs, and over all that part of the abdomen which is rendered resistant to the touch; it may encroach also more or less upon the pulmonary resonance, and extend more than usually to the left of the median line. The dulness is uninterrupted by any resonance, except in very rare instances, and is traceable into the right hypochondriac region. In cases of considerable enlargement, it does not descend so much as it ought with the act of inspiration. Auscultation is only significant of hepatic enlargement in so far as it indicates an encroachment on the organs in its neighbourhood. The sounds of the stomach and intestines may thus be displaced: the breath and voice sounds over the lower part of the right side of the chest become inaudible so far as the liver extends upwards in contact with the parietes; posteriorly at the lower part the "hepatic compression rhonchus" may be observed, and where the lung is much compressed the breath and voice sound becomes tubular, especially in the interscapular region. At the same time exaggerated

respiratory murmur may be perceived over the left side of the chest.

The diseases of the liver which are signalized by enlargement are simulated by various affections of the chest and abdomen, which produce in common with them a greater or less number of the physical phenomena described above. The diagnosis of the diseases of the abdomen which might be confounded thus with hepatic enlargement, I shall defer till each comes under consideration. Chest diseases stimulate hepatic enlargement, by detruing the liver more or less completely beyond the cover of the lower ribs, occupying its situation in respect to the surface, either with enlarged organs or the products of morbid action. The more important of these are, emphysema of the lungs, pleurisy with effusion and pneumo-thorax. Pleuritic effusion, on the right side, with depression of the liver, agrees with hepatic enlargement in producing bulging of the side, with deficient movement on inspiration; in abolishing the vocal vibration; in producing a palpable hepatic tumour in the abdomen, and dulness on percussion over it extending to the right hypochondrium; and, lastly, absence of breath and voice-sound over the lower regions of the chest, &c. The points of distinction between them, however, are sufficiently obvious: in pleuritic effusion the lower ribs are less protruded, and the cartilaginous margin of the thorax less everted, than occurs in great enlargement of the liver; the intercostal spaces are more commonly protruded, and their width increased; the detrusion of the heart and mediastinum to the left, not upwards, as in hepatic enlargement. The direction of the interlobular notch also is a ground of diagnosis; in enlargement of the liver it maintains its natural perpendicular direction, but where detrusion of the liver into the abdomen has occurred, the right lobe assumes a position below the left, and the direction of the fissure is rendered oblique. It may be added, that in pleuritic effusion there will be no alteration in the thickness of the edge of the liver to be felt, and the proportional distance between the navel and the bottom of the sternum will not be increased. The diagnosis from pneumo-thorax and hydro-pneumo thorax will be grounded on similar indications; both must be to a great extent before

the liver would form a palpable tumour in the abdomen, or the chest be bulged enough to give rise to the probability of an error in diagnosis. In addition, therefore, to the lateral detrusion of the heart and mediastinum, &c., pneumothorax is distinguished at once by the tympanitic character of the thoracic resonance, and its encroachment upon the upward level of the hepatic dulness. In hydro-pneumo-thorax, however, there may be more liability to error, from the fact of the hepatic dulness being here continued upwards by that of the effusion, which at a certain level is succeeded by resonance: this might be mistaken for the line at which the liver ceases to be in contact with the wall, and that of the lungs begin; but it is distinguished by the resonance of the upper part of the chest being more tympanitic than it ever is in hepatic enlargement, and the line at which it is replaced by dulness being capable of variation by altering the position of the patient. The special signs of the affection—amphoric respiration, metallic tinkling, and fluctuation on succussion—readily confirm the diagnosis. In emphysema, also, the detrusion of the heart, if the disease is confined to the right side alone, is to the left; and, if on both sides, the dulness of the organ is neither discoverable at nor above its natural seat, but together with the impulse is lowered towards the epigastrium. The bulging of the right side and the abolition of tussive and vocal vibration, is distinguished from that produced by hepatic enlargement by the resonance and elasticity on percussion encroaching on the the upper limits of the hepatic dulness, while the respiratory murmur is audible over the same surface. When the emphysema affects both lungs, and there is impulse at the epigastrium, there will not be found, on measurement, the increase in the proportional girth of the right side of the chest, which hepatic enlargement presents. It must, however, be kept in mind while guarding ourselves against mistaking detrusion of the liver with chest disease for enlargement of the organ, that the two states may coexist, and that an enlarged and diseased as well as a small and healthy liver may be depressed by thoracic disease. After these general observations, which may be taken as applicable to all the diseases of the liver which are accompanied by enlargement,

I shall pass on to describe the phenomena which physical examination discovers, as more or less peculiar to each special form.

Congestion of the liver, and hepatitis.—The physical signs of simple *congestion* of the liver are those of enlargement to a degree commensurate with its amount. The liver may thus appear to have undergone very little increase in bulk, or, on the other hand, it may be greatly enlarged, especially in cases of cardiac disease, where it is often conjoined with some textural alteration and hypertrophy: it may, in the latter case, reach as low as the level of the spine of the ileum. In the pure form of congestion it is rarely that palpation can discover the margin of the organ so as to ascertain its characters,—partly on account of the fulness of the colon with gas and accumulated faecal matter, and partly because there is no laxity of the abdominal wall, while the tenderness may cause in some cases an involuntary muscular resistance to the pressure of the hand. All that palpation can mostly discover is deficient yielding to pressure beneath the margin of the ribs on the right side, when compared with the left, to the extent of a few fingers' breadth. Where the edge, however, can be felt, and the nature of the surface of the enlarged organ ascertained, the former will be perceived to be even, and only slightly thickened, and the latter to be smooth. Percussion is more useful in determining its dimensions. The increase of dulness is generally in all directions; but it may be perceived to occur principally in the downward direction, or it may chiefly occur upwards so as to encroach upon the pulmonary resonance, while but little is perceived below the margin of the ribs. The dulness does not shade off into the resonance of the intestines quite so perfectly as it does in health. An important and interesting character in enlargement from congestion lies in the rapidity with which its indications sometimes subside within the course of a few hours after a full blood-letting has been practised from the arm, or the portal system has been depleted by cupping over the liver, or the application of leeches to the verge of the anus. There is often pain enough in congestion to render the abdominal inspiratory movement defective over the right side.

Prior to the formation of abscess, *inflammation* of the liver presents the

same signs, on physical examination, as congestion, and the enlargement is sometimes to a very trifling extent; indeed, in cases of very circumscribed hepatitis, there may be no signs of enlargement of the organ at all. The existence of hepatitis about to pass into suppuration has been stated on good authority to be indicated very commonly by a resistance to the hand over the right rectus muscle, occasioned by its quick and involuntary contraction, and that this occurs even in impending abscess of the centre of the organ, where there is but little indication of general enlargement to guide the practitioner in his diagnosis. When the left lobe is simultaneously affected, the same resistance may occur over the left rectus, and the limitation of the abscess to the left lobe may be pointed out by the left rectus alone presenting the phenomenon alluded to. Were this constantly the case, however, and incapable of arising from other morbid conditions of subjacent parts, it might prove of infinite diagnostic value. Further inquiry, however, has brought to light the fact, that although it is a frequent sign of suppurative hepatitis, yet it is not always confined to the right or to the left rectus muscle, but may occur over all the abdominal surface; and, moreover, that not only is it often absent in the form of disease under consideration, but it may, in its limited as well as in its general form, be noticed in such very different affections as cancer of the stomach, inflamed gall-bladder, colonic disease, or peritonitis.

The occurrence of *abscess* of the liver is sometimes unmarked by any distinctive signs, and in very numerous cases has its existence been unsuspected, and at all events unascertained, until revealed by examination after death. This occurs especially when the abscesses are small and numerous, when the suppuration occurs in the centre of the organ, or towards its inferior surface. In other cases, however, the physical signs of the abscess are clear and unmistakable. Inspection may then display, in addition to the general fulness arising from hepatic enlargement, a new and special fulness, bulging or "pointing" in one or more situations corresponding with the situation of the liver, beneath the margin of the ribs, in the epigastrium, in the lumbar region, or in the lower intercostal spaces. When the

abscess is confined to the left lobe, the fulness may be confined to the left of the median line, while no general expansion is to be remarked of the right hypochondriac region. It has been stated that sometimes as abscess forms, and its signs become evident, those which indicate a general increase in the bulk of the liver lessen. This, however, is by no means commonly observed; for not only, in general, do we find the enlargement of the organ on the increase with the progress of suppuration, but the emaciation to which it gives rise renders still more obvious to inspection the abnormal fulness of the upper regions of the abdomen. In some cases where there is great general hepatic enlargement, the superficial veins of the abdomen may appear enlarged. Before pointing occurs, however, palpable circumscribed tumour commonly becomes evident, occupying a larger or smaller space beneath the margin of the ribs or in the epigastrium. There is often much difficulty, from the thickened condition of the tissues, in ascertaining its character, its nature being arrived at by a consideration of the concomitant symptoms and the time which it has consumed in its development; but as it advances towards the surface it commonly presents a softened or boggy feel in the centre, which may pass on to decided fluctuation, while the base and circumference are hard. When adhesion has occurred between the abscess and the parietes preparatory to its spontaneous discharge on the surface, oedema and redness of the latter over the seat of tumour are conjoined. The tumour does not alter with changes in the position of the patient. In some cases of abscess extending several inches below the margin of the ribs, there has been observed no hardness or palpable tumour whatever, but the wall has yielded readily and naturally to the pressure of the hand. Where the abscesses are very numerous, and none of them of large size, fluctuation may be entirely wanting. Sometimes an abscess of the liver will occupy a great part of the abdominal cavity. Wherever it extends, it will produce dulness on percussion over the corresponding part of the abdominal wall, whether this be upwards towards the chest, or downwards into the abdomen: in the former case it may encroach upon the pulmonary resonance as high as to the third rib or second inter-

costal space. When abscess occurs in the left lobe, it may point towards the cavity of the pericardium, and the dulness on percussion will then be undistinguishable from that of the heart. The elevation of the heart's apex, and its removal slightly to the left, will enable the observer to recognise this occurrence.

Abscess of the liver may not only evacuate itself on to the surface of the abdomen, but may burst either into the cavity of the peritoneum or into the other neighbouring serous sacs or hollow organs. Wherever it opens, its discharge is accompanied by subsidence of tumour, and by the development often of new signs, according to the part which is made to receive the contents of the abscess. It frequently occurs into the lung, either the right or left,—most commonly the former, more rarely into the pleura, and still less commonly into the pericardium. When the pus enters the lung it passes through the bronchial tubes and is expectorated; when it opens into the stomach it may be vomited; and when into the colon, it passes along its course and is evacuated by the rectum. In any case, its appearance with subsidence of the tumour indicates the accident which has taken place. Other signs, however, occur which it will be necessary to notice. When the pus has escaped into the pleura or pericardium, it gives rise to the ordinary signs of fluid in those cavities, the history of the case distinguishing the collection from the results of inflammation of those sacs. When it has opened into the bronchiæ, it may be either expectorated as it escapes into them, or a series of physical signs may occur from the accumulation of the pus in the air-tubes of the lower lobe of the lung. These may consist in the sudden occurrence of dulness, with increased resistance and absence of breath-sound over the whole of the lower region of the chest, without any dilatation of the side; lateral detrusion of the heart, bronchial respiration or bronchophony, gradually giving place to mucous rhonchus, commencing at the root and extending over the dull portion, and a restoration of the natural respiratory murmur and vocal resonance. When the cavity of the abscess contains air from the lungs, as well as its own secreted fluid, cavernous breath and voice-sound may be heard over its seat, toge-

ther with gurgling; and the percussion-sound, the voice, breathing, or cough, may present the amphoric character and metallic tinkling. When the cavity has been filled with gas from the stomach or intestines, similar phenomena may be developed by percussion, deep breathing, and cough, or on causing the gas, by pressure, to pass through the aperture into the sac. It sometimes happens that the cavity of an abscess opens both upon the surface and into the lungs; in this case, on coughing, air has been observed to pass out by the external opening, and to be sucked in with a whistling sound during the respiratory acts.

Chronic enlargement and hypertrophy.—Under the above term I include all those chronic enlargements which occur, with more or less induration, in scrofulous children, in persons exposed for a long time to malarious influences, or in those who labour under chronic cardiac disease, &c. It is common for ascites to stand in the way of the physical determination of the state of the liver in these forms of enlargement; but even this does not always destroy the indications of hepatic enlargement derived from inspection and measurement. Its downward extent may sometimes be traced by palpation suddenly made through the intervening liquid, but more readily after tapping has been performed. It may be felt descending completely into the pelvis, and simulating ovarian disease. When the edge can be felt it is perceived to be thickened, and hard; it may be irregular, and the surface of the organ is often less smooth than in the natural state. Where the surface of the enlarged liver is tuberculated, a thrill with the pulsation of the heart may be perceived by the hand applied over the epigastric region. The percussion of the liver is accompanied by a high sense of resistance. The distance from the sternum to the navel is commonly increased, and enlarged veins appear upon the exterior of the abdomen.

Fatty liver.—The circumstances under which fatty liver occurs are more distinctive of the nature of the enlargement than are the peculiarities of its physical signs. Its more frequent occurrence in females, and the abuse of stays to which they are commonly addicted, render nugatory in many cases the signs derived from inspection and measurement.

It has appeared to me less apt to rise high into the chest than the other forms of enlargement, and thus to encroach less upon the pulmonic resonance on percussion. It presents no remarkable hardness on palpation, and its surface is always smooth. In the advanced stage, the edge, if capable of being felt, will be perceived to be swollen, but not irregular. On percussion, it is often found extending remarkably to the left of the median line, and the resistance is less than in other forms of chronic enlargement.

Cancer of the liver.—In this disease not only are the signs of hepatic enlargement observable, but they present peculiarities which in a remarkable manner distinguish this form of new development. Sometimes, however, as especially in its early stages, when the cancerous masses are few and small, there is neither general enlargement nor any other physical evidence of the presence of the disease. This also will be modified by the part of the organ affected, the form of the cancer, and the mode in which it grows. The protrusion of the cartilages of the ribs is often very partial, the rest of the hypochondrium being natural. The ordinary effect of it is to produce tumours in the organ, which project more or less from its surface, and both affect the form of the exterior of the abdominal wall, and become perceptible by the touch and by percussion. The edge of the liver is often greatly rounded; but sometimes, though irregular, it may be thin. The tumours are superficial, sometimes solitary, but more commonly numerous; when large, and coalescing, they give to palpation the idea of a bulky mass divided by sulci into large lobulations. They are either prominences upon the felt surface of the liver, which maintains its natural form more or less, or the latter may be completely lost, and the mass of tumour alone be recognised passing up towards the right margin of the thorax, and connected with the organ which lies in that situation, while below the fingers may often be insinuated beneath it. The tumours from encephaloid cancer are mostly of a larger size than those of scirrhus; and so rare is colloid of the interior of the liver, that nothing can be said of its physical signs. Encephaloid tumours reach sometimes into the pelvis, and may even, when situated in the

right lobe, be felt extending beneath the soft parietes of the abdomen far into the left side. They often extend downwards more than in other directions; the whole organ being depressed into the abdomen by their weight. When small, the surface of cancerous tumours may be felt to be cupped more or less in the centre; and, when large, a variety of irregular elevations and depressions may be perceived over their surface. Tumours, at one time separate, may, after the lapse of a few weeks, be found to have coalesced. They commonly are first noticed in the right lobe, beneath the margin of the ribs, or in the epigastrium; and the largest are often to be felt near the situation of the suspensory ligament. Sometimes, although the liver may be abundantly filled with cancerous matter, no great amount of general enlargement may be found, or the surface may be as even as in other forms of enlargement, no elevations at all being evident upon it. Another character of the soft variety of cancer is its rapid growth. The hardness of the cancerous tumour varies: scirrhus is decidedly hard: encephaloid, however, may have a softer feel, being more or less elastic, or exhibiting something like obscure fluctuation. When softening of a cancerous mass occurs, the elevations felt disappear, become hollowed out, and supplanted by a depression. Cancer affecting the lower surface of the organ at the entrance of the portal vessels is commonly complicated with ascites, and then it is often only after tapping that the enlarged organ, with its annexed tumours, can be felt. The weight of the liver, as ascertained by movement of it by the hands (if this can be effected), is observed to be greatly increased. When the left lobe alone is affected, the tumour may be confined to the left of the median line: it sometimes pulsates also, but this phenomenon disappears on placing the patient upon the hands and knees. On percussion, dulness with resistance is observed over the mass of enlarged liver, and over the tumour; the one being continuous without interruption into the other. The line of superficial dulness, both above by the side of the thorax, and below, may be uneven. The dulness may not rise high into the chest in cases even of great enlargement, where the

tumours occupy a large portion of the abdomen. In cancer of the left lobe the dulness may rise as high as the second or third rib on that side. The continuity of the dulness, however, is not a constant characteristic, as I have met with a resonance on percussion between a dull tumour towards the centre of the abdomen and the seat of continuous dulness of the liver. This has been due to the colon crossing the surface of a lobulated encephaloid mass, and lying in a groove. The diagnosis of the nature of the tumour below the resonance, however, could in such a case be made out by observing that, on pressure over the resonance, a dull sound could be elicited, and a solid part beneath be felt continuous between the tumour below and that above it, and by the resonance having a direction more or less horizontal. Even where the cancerous deposition is to a great extent, the measurement of the two sides may be equal; but often this mode of examination indicates, as in other forms of enlargement, increase of the circumference of the right side. The relative girth of the different levels of the trunk, however, are often remarkably modified according to the locality of the greater mass of disease. As, in encephaloid, the increase is mostly towards the abdomen, it is the lower measurements which are proportionally the largest; and often the proportional distance of the sternum and navel is greatly increased. I have met with it as great as $10\frac{1}{4}$, while that between the navel and pubes was $4\frac{1}{2}$ inches. The superficial veins are commonly enlarged. According as cancer of the liver encroaches upon the chest, it produces, of course, all the signs enumerated of enlargement in this direction. When it is the left lobe alone which is the seat of disease, the heart has been observed to present the ordinary indications of displacement to the right, while respiratory murmur has been abolished over the left front as high as dulness extended, and posteriorly, dulness on percussion, with tubular breathing and bronchophony, have been observed. This series of phenomena might be confounded with the effects of pleurisy and pneumonia. The former might give dulness, and displace the heart, but would, in addition, greatly expand the left side of the lower part of the chest, and protrude the intercostal

spaces, while it would not produce a tumour beneath the margin of the ribs: pneumonia, again, would not displace the heart or produce tumour beneath the ribs.

Hydatid Disease of the Liver.—When a hydatid cyst forms and attains any size in the liver it commonly produces visible elevation of the surface over its seat. Tumour connected with the liver is also evident on palpation. Its ordinary seat is at or near the epigastrium, or it protrudes from under the margin of the ribs on the right side. No general increase in size of the liver may be ascertainable by any of the means of exploration, but sometimes this may be conjoined. The tumour is commonly solitary, but there may be more than one perceived, and where both lobes are attacked, the largest tumour is noticeable over the situation of the right. The outline of the liver, even when enlarged, may be perfect, and where the tumour passes from under its edge it may appear fixed. The fact of the tumour occupying the right side of the abdomen is no evidence of its origin in the right lobe, as a cyst arising in the left may extend in this direction, and even descend into the right iliac fossa. The size of the tumour varies; it may be very large, and may appear to vary with the state of distension of the stomach, especially when seated in the left lobe. Its shape is mostly globular, and its surface even and smooth, but occasionally it is more or less lobulated, and its exterior feels unequal. It never grows so rapidly as some other hepatic tumours, and is often of very slow growth and very chronic duration. It may be hard to the touch, and in this way not distinguishable from a solid tumour, but often it presents a high degree of elasticity. This, when present, is a very characteristic sign. The hardness may vary in different parts of the tumour. It sometimes fluctuates, but even when fluctuation is noticeable it is not less obscure than that of encephaloid cancer, and the thickness of the capsule will influence its perfection. Hydatid tumour of the liver is, like other forms of enlargement, sometimes obscured by ascites. Like cancer it sometimes transmits pulsations from the aorta, which may be distinguished from those of aneurism by their cessation on placing the patient on the hands and knees, so as to favour

gravitation from the vessel. On percussion a hydatid tumour is dull, and the dullness is continuous with that of the liver, and is bounded, like the liver dullness, by the resonance of the stomach and colon. When the proper proportion exists between the hydatid vesicles and the intermediate liquid, the hydatid fremitus is perceived during the percussion, or heard on practising auscultation. When the disease is extensive it obstructs the diaphragmatic movements; like other forms of enlarged liver its dullness may rise up into the chest, and the superficial veins of the abdomen may be increased in size. Hydatid cysts of the liver sometimes become inflamed and suppurate, and the abscess thus formed may present the same signs as if it arose in any other manner. They sometimes open, and discharge their contents into the peritoneum and pleura, the lung, alimentary canal, or upon the surface of the abdomen. When this occurs, subsidence of the tumour is noticed, along with the evacuation of hydatids by coughing, vomiting, or stool. When these accidents occur, the signs of cavity may be observed as when abscess evacuates itself by the same channels. In a case where a hydatid cyst of the left lobe opened into the stomach, and a chronic communication was established between the cavities, an uniform swelling was noticed in the precordia, which was always most prominent after taking food, and lessened immediately after the act of vomiting, whether this was spontaneous or the result of an emetic. In another patient, whose case is reported by M. Guillemin,* where the sac containing the hydatids had formed a communication with the intestinal canal, the expulsion of the hydatids into it was accordingly accompanied, during a period of twenty minutes, by a true tinkling sound, similar to that produced by grains of fine sand falling into a glass cup, and audible by the naked ear at the distance of a foot from the patient.

In addition to hydatid cysts of the liver, simple serous cysts sometimes occur, which occasionally attain a very enlarged size, and, like an enlarged liver, may come to occupy a large portion of the abdomen. When they form near the upper surface of the liver they may push up the diaphragm on the

right side as high as the level of the second rib, and depress the rest of the liver far into the abdomen, giving rise to the idea that the organ is enlarged. The peculiar form of the right side of the thorax in these cases, and the absence of the signs of thickening and enlargement of the part of the liver beneath the margin of the ribs, will commonly assist in the diagnosis. Great deformity and expansion of the side is produced by a cyst developed beneath the cover of the lower ribs, raising them and so turning them on their axes that their outer surfaces become superior and their inner inferior. When a serous cyst is formed near the under surface of the organ it projects downwards into the abdomen. If its walls are lax it may present more or less fluctuation, but often it is as hard to the touch as a solid organ, so as frequently to have been mistaken for enlargement of the liver.

Cirrhosis of the Liver.—In the advanced stages of this disease the abdomen is generally distended by ascites, and the obstruction in the portal system of vessels which throws this obstacle in the way of a physical examination of the liver, mostly gives rise, also, to the enlargement of the superficial veins of the abdomen. The palpation, however, may be practised through the intervening layer of fluid, and by quick depression of the fingers in the epigastric region they may be perceived to strike upon a solid organ. In the form of cirrhosis in which the general bulk of the liver is lessened, this may be the only spot at which it can be perceived at all, not being discoverable beneath the margin of the ribs in the vertical line of the nipple. In some forms of atrophy the left lobe of the liver may be almost lost, and then even at the angle of the epigastrium no solid organ can be felt on the most diligent search. The condition of the edge and surface of the organ are most easily ascertained after tapping: they are then found to be uneven and nodulated, the edge in addition being rounded; the margin of the left lobe is felt not extending so far to the left as customary, and when the interlobular notch can be felt, is ascertained to be much diminished in its horizontal dimension. In some cases the edge of the organ may be very difficult to feel, from a portion of intestine slipping up between it and the wall. Where there is much ascites, of course

* Arch. Gén. de Méd. 4me ser. t. xvi. p. 118.

the dulness of the liver will be so merged into that of the peritoneal effusion that but little information can be obtained by percussion, except that occasionally the upper line of superficial liver dulness may be found uneven. There will be found no augmented measurement of the right side of the trunk. In the early stage of cirrhosis, it has been asserted that physical examination will give evidence of general enlargement, and that as the disease progresses gradual diminution of the organ may be traced. I have not been able, however, to satisfy myself of the truth of this statement. Certainly in many cases there has been no previous enlargement, or only of the temporary character which pertains to congestion. A granular liver is not always small even in the advanced stages of the disease, and it may even be large, as where fatty degeneration is conjoined.

42, Myddelton Square.

[To be continued.]

A CASE OF EPILEPTIC COMA.

By T. H. TANNER, M.D.

Licentiate of the Royal College of Physicians;
Physician to the Hospital for Women, &c.

On Wednesday morning, 17th September, 1851, at half-past eleven o'clock, Mr. Edwardes, surgeon, of Great Russell Street, Covent Garden, was sent for to a public-house in the neighbourhood, to see a woman who was reported to be very ill. On making his visit he found the patient in a complete state of coma, and perceiving at once that the case was one of great danger, he desired a second opinion, and I was sent for.

On my arrival with Mr. Edwardes, I found a young woman, about twenty-three years of age, lying in bed in a double-bedded room, in a state of perfect insensibility, from which it was impossible to rouse her. Her jaws were firmly clenched, so that we could not separate them; she was foaming slightly at the mouth, and her countenance became momentarily affected with slight convulsive twitchings. Her pupils were dilated, both equally so, and were insensible to the action of light; there was no squinting. Her head, chest, abdomen, &c. were well-formed, and free from stains, bruises, or marks of violence of any kind. No unnatural odour

could be detected in her breath. On separating the labia the mucous membrane of the vagina was seen pale and moist, but healthy: there was no hymen, and the general appearance of the parts led me to infer that our patient was not a virgin. The respirations were hurried, and performed with some difficulty and noise. The pulse was quick, compressible, and beating with some force. The heart was acting quickly and powerfully, and with great impulse; the systolic sound appeared less clear than natural, but there was no bellows sound. Both jugular veins were distended.

The sheet under her body was very wet, so that I at first inferred that the urine escaped involuntarily. On placing my hand on the abdomen, however, I felt the bladder much distended, and on introducing a catheter, withdrew half a chamberpotful of urine. On examining the lower part of the abdomen, and upper part of the thighs, they appeared as if they had been recently well washed.

The temperature of the body and extremities was natural.

After much deliberation, we determined to aid the diagnosis by a small venesection, being led moreover to infer from the state of the pulse, the forcible action of the heart, and the condition of the jugular veins, that the loss of blood might give great relief. The left median basilic vein was therefore opened, but only nine or ten ounces taken away, as the symptoms by no means improved, the pulse beginning to fail, and the respirations to become more hurried. Three drops of croton oil were then placed on the inner side of the lip, a blister applied to the nape of the neck, and an enema of castor oil and turpentine administered.

The history of this case is as follows:—On the previous day, this woman, and a young man, with two other couples, left Cirencester by an excursion train to visit the Exhibition. After spending the day in Hyde Park, they all six dined together, at which meal our patient stated that she felt sick; but it excited very little notice, as it was known that she was not very strong. After dinner the party set out for the play, the women having previously arranged to return to the coffee-house to sleep: but on reaching Wellington Street, in the Strand, our patient

again complained of sickness, and consequently refused to enter the theatre, but proposed that she and her male companion should walk about until the end of the performances, and then rejoin the other four. After perambulating the streets for two or three hours, they went to the public-house in Bow Street, had one glass of brandy and water, and went to bed, the landlord imagining them to be man and wife: it happened, however, that the only unoccupied room had two beds in it. The young man states that he slept in one bed, and the girl in the other, and repudiated with horror my suggestion that they slept together, or that any intercourse took place between them. In the morning, on rising, he spoke to his companion, who complained of being sleepy, and expressed a wish to remain longer in bed: he therefore left her, went out for a walk, and on his return found her still in bed, and unable to be roused. The landlady was called to her, who, becoming alarmed, sent for Mr. Edwardes.

8 o'clock P.M.—A great alteration has taken place in the condition of this young woman since we left her this afternoon. She remains perfectly insensible; respiration more difficult, and almost stertorous; countenance of a cadaverous paleness, and the features constantly affected with convulsive movements. Pulse quick and feeble. Heart acting with the same degree of violence as before. About a pint of pale urine was withdrawn by the catheter; and as the bowels were unrelieved, and the previous injection retained, another enema of soap and water was administered. A large mustard poultice was also applied over the chest, &c.

The urine withdrawn on my first visit was found on examination to be pale, limpid, very acid, and having a sp. grav. of 1008: no deposit was produced by heat, nor on the addition of nitric acid, liquor potassæ, or liq. ammoniæ. By the microscope (420 diameters) nothing could be seen but a few free oil globules—of course derived from the grease of the catheter.

The man repeated his previous statement, which he subsequently adhered to before the Coroner, although it was contradicted in several particulars, especially by the fact that only one bed was hired, and only one presented the appearance of having been slept in.

At half-past ten o'clock, P.M., this young woman died.

18th September.—*Sectio cadaveris post-mortem horas xvi.*—External appearance of the body natural, well-formed, and rather plump: no discolorations or marks of violence anywhere visible. No rigor mortis. On removing the calvarium, to which the dura mater adhered with much firmness, the sinuses of the brain appeared enlarged and somewhat congested, as did the large veins of the hemispheres on slitting up the membranes. On slicing off the hemispheres of the cerebrum, the puncta vasculosa did not appear more numerous than usual: the lateral ventricles were healthy, containing no serum; and, to be brief, every part of the cerebrum, cerebellum, and medulla oblongata, were carefully examined, and found firm and perfectly healthy. The upper half of the spinal cord was also found quite natural. The cavity of the mouth, the pharynx, larynx, &c., were healthy. In the thorax the posterior parts of the lungs were found congested, but not more so than was to be expected from the gravitation of the blood. The heart was natural in size; the cavities were healthy, as were their walls excepting those of the left ventricle, which were hypertrophied, being about an inch thick. Nothing could be found to account for this condition, there being no visible impediment to the free play of the heart, nor any physical obstruction to the flow of blood through it.

In the abdomen all the organs appeared perfectly healthy, but pale. The stomach and intestinal canal were natural; in the former was a little grumous fluid which was removed for analysis. The body of the uterus was slightly enlarged, as was also its cavity, which was lined by a soft humid paste-like secretion, analogous to the membrana decidua. The ovaries were pale, and in the left were two or three large cysts: there was no appearance, however, of a corpus luteum. In removing the vagina in order to examine microscopically the mucus from its walls I cut into the rectum, and made such a mess that my object was defeated.

On a subsequent examination of some of the tissues, &c., microscopically, nothing abnormal could be discovered. The structure of the kidneys was natural. The muscular fibres of the heart were particularly examined, but with the

same result: there was no fatty degeneration. The watery part of the blood appeared to be in excess, with a deficiency of red globules.

An inquest having been ordered it became necessary to ascertain with certainty the absence of any poisonous agent, although there was no reason to suspect the presence of such. I therefore first applied the tests for morphia and meconic acid to the contents of the stomach, but failed in obtaining any evidence which would lead to the supposition that opium had been administered. The blood was then examined for the purpose of detecting chloroform on the plan advocated by M. Ragsky, founded on the principle that when this agent is exposed to a red heat it is decomposed into chlorine and hydrochloric acid. For this purpose a small bottle was half filled with blood, and stopped with a cork holding a curved tube, into which a piece of paper covered with paste and supporting some iodide of potassium was introduced. A portion of the tube between the paper and the bottle was then heated by the spirit lamp, and the bottle placed in boiling water, but no appearances indicative of the presence of chloroform could be obtained. Had any been present it would have become volatilized, and decomposed while traversing the heated part of the tube, when its chlorine, set free, would have decomposed the iodide of potassium; the iodine in its turn being set free, and acting upon the starch of the paste, producing the characteristic blue colour.

REMARKS.—I have thought this case worthy of record, not only on account of its presenting some interesting features in a medical point of view, but also because it may prove a not unimportant contribution to forensic medicine.

And looking at it in its relations to practical medicine, I would notice that several similar cases have been recorded by Dr. Abercrombie under the name of congestive or simple apoplexy, though, as shown by Dr. Todd in his admirable Lumleian Lectures for 1850,* they might with much more propriety be referred to a state of epileptic coma. This opinion is not invalidated by the fact that this girl had never previously had a fit of epilepsy, as I imagine that

the strong excitement under which she may so reasonably be supposed to have suffered, together with her weakened condition, were quite sufficient to develop such an attack. She was naturally of a weak constitution, and of a very excitable temperament; and it was for these reasons against the wish of her parents that she made the present excursion.

Let me, however, mention that it was not until the father came to London to attend the inquest, that we could ascertain with any degree of certainty the previous state of this unfortunate girl's health; could I have done so, I should blame myself much more than I do for having practised venesection. I would particularly draw attention to the fact, that the loss of only nine or ten ounces of blood in this case did great harm, although I think and sincerely trust that it did not materially influence, though it may have hastened, the result. I believe, that as regards the vast majority of cases of delirium and coma, the truth of Dr. Todd's assertion that they are non-inflammatory, is undeniable; and I think the present instance may be adduced as a proof of the justness of his observation, that "the employment of general or local blood-letting is a practice not to be justified by anything in the clinical history or the morbid anatomy of these affections, unless perhaps in the truly inflammatory forms, or where some inflammatory complication may exist." He also remarks, "that bleeding tends to the production of that state of blood which is favourable to the development of the comatose or delirious states."

Of the great value of these statements I have been long convinced, having seen many of the patients under Dr. Todd's care, the consideration of which have led him to these conclusions. The subject of this paper, therefore, would not have been bled, had we not have been misled by the forcible action of the heart, and the distension of the jugular veins. Looking at the girl's age, the absence of any morbid sound on auscultation, and the want of a decided contradiction of the heart by the pulse, it was thought that the steady uncontrollable impulse depended upon an excess of blood having to be urged onwards: the possibility of the existence of simple hypertrophy was never thought of.

* Published in the MEDICAL GAZETTE during the same year.

How this hypertrophy of the walls of the left ventricle was produced it is of course difficult to say; but it is worthy of notice that this girl had such a love of dancing, and was so continually engaged in it, that it caused her parents much uneasiness, and was mentioned by the father to Mr. Edwardes as a remarkable fact.

We also learnt from the same source, that the catamenial periods were exceedingly irregular, and that great pain was always endured at those times: that she suffered, in short, from congestive dysmenorrhœa. I need hardly mention, that during the intervals of this disease false membranes are frequently formed and expelled, their formation being seen in the uterus under consideration; and that although they present some analogy to the true decidua, yet they are in fact different, being morbid products, and of a thin and more unsubstantial nature. In my examination of the vagina and external parts during life, I was led to believe that our patient was not a virgin. I would now, however, that I am acquainted with the history and the post-mortem inspection, beg to qualify that opinion, and to state that I am by no means certain that the appearances which gave me this impression were not deceitful, and caused by the effects of the leucorrhœal discharge which so generally accompanies the form of dysmenorrhœa under which this person suffered, and which is frequently excessive.

In conclusion, I would observe that the case speaks for itself in regard to its value in a forensic point of view (a verdict of Natural Death was returned by the Coroner's jury); while as regards its moral history, I do not wish to say one word. It is by no means a pleasant task to judge too severely of the conduct or statements of others; and it is in this instance the less necessary, as the history, as related to me, is laid before the reader, who is consequently at liberty to take it at its worth.

Charlotte Street, Bedford Square,
23rd Sept., 1851.

ROYAL COLLEGE OF SURGEONS.

At a special court, held at the Royal College of Surgeons of London on the 13th inst., Mr. Leslie Ogilby Patterson, of Downham Market, in the county of Norfolk, passed his examination, and obtained his diploma.

A FATAL CASE OF ULCERATION OF THE INTERNAL JUGULAR VEIN OCCURRING AFTER SCARLET FEVER.

BY WILLIAM SEDGWICK,
Surgeon, St. Marylebone Infirmary.

THE following account of a fatal case of ulceration of the internal jugular vein occurring after scarlet fever may be interesting from the rareness of its occurrence, and from the probability that blame might be attached to a surgeon opening an abscess in that part when symptoms such as those described follow, more especially if the communication with the vein had been established previous to the incision being made, when a gush of mingled blood and pus would follow, in place of the two discharges succeeding each other.

C. W., æt. 4½ years, scrofulous diathesis, has been in a delicate state of health for some time past, and has lately been subject to worms. Was attacked with scarlet fever on the 19th of August, 1851, the disease being at the time very prevalent in the neighbourhood. The fever was severe, and attended with general and well-marked scarlet eruption over the whole body, and swelling on each side of the throat, but more considerable on the right side than on the left. This enlargement on the right side continued to increase, and fluctuation was detected on the 1st of September: but the matter lay deep. Poultices were applied, and continued till the 3d inst., when a small incision was made into it, and about seven or eight drachms of pale, straw-coloured pus escaped, followed immediately by a discharge of dark blood. The edges of the wound were at once closed with adhesive plaster, and a compress, secured by a bandage, seemed to arrest the hæmorrhage. In the evening the mother sent to the Infirmary, stating that the hæmorrhage had recommenced, and that she could not stop it. A friend visited the patient for me, and succeeded in arresting the flow of blood by pressure with a compress and bandage carried round the head and under the shoulders, forming a double figure of 8. The bleeding broke out twice afterwards at intervals of two and ten hours respectively. On the last

occasion a narrow strip of lint, steeped in Tinct. Ferri Sesquichloridi, was passed between the lips of the incision, and compresses saturated with the same were secured over it by bandages as before. The hæmorrhage was now completely stopped externally; but it was evident, at my next visit in the afternoon of the same day, that it was going on internally, and the cavity of the abscess was becoming filled and distended with blood. The child was in a very exhausted state from the loss of blood and the extensive suppuration which had taken place,—collections of matter having formed on the left side of the throat immediately below the angle of the jaw, and likewise over the left clavicle, to the inner side of the acromion process, and partly extending over it: this last abscess was very prominent, and about the size of a large walnut.

On the following day (5th inst.) the cavity of the abscess was found to be greatly distended; and it was conjectured that the coats of some vein were probably ulcerated through, permitting the escape of blood into the cavity. As a last resource, I decided upon making a free incision and ascertaining the cause of the hæmorrhage, in order to arrest it if possible, although I entertained little or no hope of saving the life of the child. Accordingly, about 1 P.M., I proceeded to lay open the sac, with a narrow curved bistoury, to the extent of twelve or fourteen lines, when about four ounces of dark fluid blood mixed with coagula were removed; but the hæmorrhage immediately became so violent that I was obliged, with the assistance of a friend who was present, to press back firmly the walls of the cavity for the purpose of closing the bleeding orifice, as there was instant danger of the patient dying. We succeeded in controlling the hæmorrhage. Some wine was administered, and the patient revived. The hæmorrhage was evidently from the back part of the cavity, and seemed to proceed from some large opening in the internal jugular vein. The bleeding still continued somewhat slowly to fill the cavity, notwithstanding the firm pressure made on the part by compresses; but no blood escaped externally till the evening, when a slight oozing occurred about 7 P.M., which was immediately checked. The child was now rapidly

sinking, and died about 9 P.M. on the same day.

Autopsy 13 hours after death.—The integuments were carefully dissected off from the right side of the neck, and the external jugular vein traced to its termination below the subclavian: it lay along the outer and back part of the external wall of the abscess, about three lines behind the incision, and was free from lesion. The cavity was next laid completely open, so as to give a full view of its extent, which was very great,—the digastric and stylo-hyoid muscles, with the main vessels, &c., being in great part dissected out by the suppurative process: a diseased gland of large size, which hung free in the cavity, was removed. An opening was now discovered in the internal jugular vein, of an oval form, with ragged edges, and about four lines in length. This at once accounted for the fatal hæmorrhage. The ulceration had, in all probability, so thinned the coats of the vein, that when the contents of the abscess had been discharged, and the pressure consequently removed, the blood in the vein had burst its boundaries, and continued to escape notwithstanding the attempts made at compression, which were altogether useless in a case of this nature.

September 1851.

TUMOUR OF THE ORBITAL CAVITY. EXTIRPATION OF THE EYE. BY DR. HOOPER.

THE patient from whom this disease was removed was a pale, feeble-looking man, fifty-three years old. The disease had existed in the left eye for three years, was never attended with any severe pain, but a sense of weight and uneasiness. The eye was much protruded, the organ itself not enlarged, cornea transparent, much chemosis of the conjunctiva and eversion of the lower lid: vision entirely gone for the last two years. Oct. 29. An exploratory incision gave issue to a quantity of serous fluid, and the protrusion became much diminished, but again increased; and on the 26th of Nov. the eye was removed (patient under the influence of ether). There was found behind it, and slightly adherent to the sclerotic, a tumour, which, examined by Dr. J. H. Bigelow, was found to be of a semi-transparent structure, and of an albumino-fibrous nature. Dr. Bigelow showed drawings of the microscopical appearances; simple nucleated cells, with no appearance of a cyst.—*American Journal of the Medical Sciences.*

DR. RAMSBOTHAM'S REPORT OF CASES

THAT OCCURRED IN THE EASTERN
DISTRICT OF THE
ROYAL MATERNITY CHARITY.

THE last report of the cases that occurred in Dr. Ramsbotham's district of the Royal Maternity Charity, published in the MEDICAL GAZETTE, was carried down to December 31st, 1843, and will be found at page 517 of the second vol. of that work for 1843-44. The publication of these reports is now resumed in a brief form, and will be continued to the commencement of the current year.

During the year 1844, there were delivered in the Eastern District of the Royal Maternity Charity, under the superintendence of Dr. Ramsbotham,

1936 Women,—of which cases

1 was a triplet, girl, boy and girl, at full time; the heads of the first and last, and the breech of the second foetus, presented. The children were all living, and continued well during the month.

21 were twins, one in about every 92 cases. Of these in 4 cases both heads presented; in 12 the presentations were head and breech, or inferior extremities. In 8 of these cases the children were both boys, in 9 both girls, and in 4 one girl and one boy.

1002 children were males.

957 children were females.

1896 were presentations of some part of the head; of which 5 were face presentations—one in about every 392 births.

55 were presentations of the breech or some part of the lower extremities—one in every 35.34 births; of these 22 were twins, and one was a triplet.

8 were transverse presentations, or one in about every 245 births. They were all at full time, and in all the operation of version was resorted to.

In 4 the placenta was entirely, and in 1 partially, implanted over the os uteri—one in 387.1 cases. In all five instances the children were turned, and four of them were born living. The mother of one of the living children died an hour after delivery.

7 were complicated with dangerous hæmorrhage before delivery, *not* the result of placental presentation—one in

every 276.4 cases. All the children were born naturally, after the artificial rupture of the membranes—4 of them living; 3 dead: of these latter 3, one was premature.

In 11 the placenta was retained within the uterus, either by atony or irregular contraction of the uterine fibres, or by morbid adhesion between the uterine and the placental surfaces, so as to require the introduction of the hand for the purpose of removal—one in every 176 cases. With all these there was considerable hæmorrhage, from the effects of which one woman died two hours after the termination of her labour. Another woman suffered from hysteritis, but recovered. One of the cases was a footling presentation; the others presented no peculiarity.

6 were complicated with alarming hæmorrhage after the natural expulsion of the placenta—one in every 322.4 cases:—of these women one died two hours after delivery, and in one case the flooding occurred a fortnight after labour, without any assignable cause.

4 women were delivered by craniotomy—1 in every 484 cases. Of these, 1 was a face presentation, another a case of contracted pelvis, the third a lingering labour, the foetus being dead, and in the fourth case the operation was undertaken in consequence of atony of the uterus, the foetus also being dead.

1 was delivered by long forceps. There was contraction of the brim of the pelvis, and the woman had been delivered of several children by craniotomy. The child in this instance was born alive.

3 were delivered by short forceps—one in about every 645 cases. In one instance they were required in consequence of the large size of the child, the mother having had four natural labours previously; and in the other two cases they were employed to terminate lingering labours, the women having required their use on former occasions. In one of the latter instances the child was still-born.

There was not a single instance of puerperal convulsions.

10 women died within the puerperal month, or from puerperal causes—being 1 in every 193.3 cases; only 7 of them, however, as a consequence of labour, there being one death from fever, one from valvular disease of the heart, and one from chronic pneumonia.

Of the deaths from puerperal causes

3 were from the effects of hæmorrhage, each of the women dying from one to two hours after the termination of labour. In one case the placenta was adherent and removed by the hand, in the other it was expelled naturally, and the third was a case of placental presentation.

2 were from peritonitis. In the first case, the woman continued well until the 8th day, when the disease set in after imprudent exposure to a cold wind, and she died on the 14th day. In the other case, violent passion the day after labour was immediately followed by rigors, and the woman died on the 9th day.

1 was from *inversio uteri*, with very little hæmorrhage. I was with the patient about an hour after the occurrence had happened; she was then dying, apparently from the shock the system had sustained, certainly not from the loss of blood. I was assured by the midwife in attendance, who is a well-informed and careful woman, and on whose word I can rely, that *not the least effort had been made to extract* the placenta; but that directly after it had passed she felt the tumour in the vagina. The patient died before I left the house.

1 was from hysteritis on the 10th day after an arm presentation, and delivery by turning.

1899 children were born living.

60 still—1 in every 32·39 births.

Of the still-born children,

10 were premature.

6 were putrid at full time, or nearly so.

8 were breech presentations, at full time or nearly so.

6 were transverse presentations.

1 was under an entire placental presentation.

3 were after dangerous accidental hæmorrhages.

4 were delivered by craniotomy.

1 was delivered by short forceps.

1 was under lingering labour.

9 were after accident to mother.

6 died from prolapsus of the funis by the head.

1 under face presentation.

2 were the second child of twins; both heads.

2 were at full time, or nearly so; head presenting, not putrid, nor delivered by art.

MEDICAL GAZETTE.

FRIDAY, OCTOBER 3, 1851.

It is creditable to the Examiners of the Medical Faculty of Edinburgh, that they have determined to withhold their degrees from all candidates who either openly or secretly follow the principles of HOMŒOPATHY. They are determined that their University-titles shall not be prostituted to the vile purpose of supporting an infamous system of quackery and imposture. A homœopath, unless dubbed with the title of "Doctor," would find it difficult to create a practice: most of those who exercise the *mystery* in this country are already provided with titles from German Universities, procured by venality, deceit, or favour. The "perverts" from our profession know that such foreign titles are in little estimation with the British public; and, therefore, seek to improve their position by endeavouring to procure a diploma from Edinburgh, Aberdeen, or St. Andrews. The last-mentioned University has allowed itself to be deceived, we will not say *oculis apertis*, but with too great facility, considering the temptation which the open examination of non-resident graduates must necessarily offer to the needy adventurers of the profession.

Something of the spirit which has been lately displayed by the Edinburgh Faculty, is absolutely required, if it be really intended that the medical titles of our British Universities shall not be procured by these wolves in sheep's clothing. A University that confers the title of *Doctor of Medicine* on a real Homœopath turns an impostor on the world, and allows him to practise a false system of medicine by its open authority. It is not sufficient to require the production of a license or diploma

of some British College, as a guarantee of the professional character of the candidate: unfortunately the possession of these documents furnishes no guarantee. Members of the College of Surgeons, and Licentiates of the Apothecaries' Society, have of late years, from want of success in the legitimate walk of the profession, taken to that system of imposture which a few have found more profitable than regular practice. The license has, however, served to give them access to the portals of St. Andrews, and they have thus carried off the prize which they sought; namely, the Doctor's diploma.

We say nothing of the moral feelings of those gentlemen who consider it quite fair to procure this title by practising a deception on their examiners; but it is quite certain that the latter can no longer fall back upon the excuse that questions have been answered in conformity with the usual doctrines of medical practice. It is not probable that homœopathic answers would be returned to examiners who were known to be hostile to the Hahnemannian doctrines: to look for these, therefore, is absurd. Medical Faculties must now procure some information respecting the previous history of the candidate, if they really desire to prevent a gross and scandalous misuse of their University honours.

In the case of a Mr. Pope, who lately presented himself for examination before the Examiners of the University of Edinburgh, we have a good instance of the tortuous practices of candidates, and of the shrewdness of examiners in encountering and defeating them. When this candidate was asked what doses of calomel, tartar emetic, and opium, he would give in certain diseases, he in reply stated correctly the doses usually given in medical practice: and when further asked whether *these were the doses which he would himself prescribe,*

he replied that they were. In *Materia Medica*, his replies to the questions were considered satisfactory with the sole exception that *his doses of medicines were somewhat large!* It seems that his examiners had had some intimation that after graduation this gentleman intended to become a homœopathic practitioner. When a question on this point was put to him, his answer was:—"I am not *now* a homœopathist, but, after graduation, I mean to inquire into the *truth* (!) of it." He further admitted that if confirmed in the truth of homœopathy, he would not return the Edinburgh diploma, but keep it to show that he had "*regularly studied.*" It is, therefore, one of the principles of Hahnemannians that *irregular* practice is justified by the possession of a diploma to shew that they have *regularly* studied!

The Medical Faculty took these circumstances into their consideration, and very properly remitted this jesuitical candidate to his studies for a few months, in order that he might have time to inquire into the truth of homœopathy, and to come to some definite conclusion *before* graduation. He withdrew his name from the list of candidates, and the University has thus been spared the disgrace of confirming the Doctorate of Medicine on a homœopath in disguise.

This case should furnish a serious warning to the Examiners of all British Universities. Mere answers to questions are not now sufficient to justify the granting of a diploma. Some inquiry must be instituted, or homœopathy will wrongly acquire the credit of receiving the acknowledged support of our British Universities. In the meantime, it is worthy of consideration whether gentlemen so greedy of titles would not be acting a more honourable part to found a University of their own, rather than procure degrees on false

pretences from Institutions which equally repudiate them and their doctrines.

It is a matter of great regret, that in a kingdom under one government and one system of laws, there should be an entire want of uniformity in the preparation and strength of compounds daily employed for medicinal purposes. We have no NATIONAL PHARMACOPŒIA. England, Scotland, and Ireland, each claims its own pharmacopœia, as the only true, infallible, and perfect model of a work of this description. It will doubtless appear strange to those who are not versed in the mysteries of the Apothecaries' shop, that there should be any variation in the strength of British medicines *bearing the same name*; and that a prescription prepared in Edinburgh or London should be likely to produce widely different effects,—but such is nevertheless the fact. It is, we believe, quite true that a uniformity of strength in the pharmaceutical preparations of the three kingdoms is the exception to the rule; and in some cases the diversity exists among compounds of a very formidable nature,—overdoses of which are likely to produce fatal effects. A writer who has lately commented upon the inconveniences attending this want of uniformity, states that:—

“the “*acetum colchici*” of Dublin is three times the strength of the “*acetum colchici*” of Edinburgh and London. The “*acetum opii*” of Edinburgh is three times the strength of the “*acetum opii*” of Dublin. The “hydrocyanic (Prussic) acid” of Edinburgh is nearly twice as strong as that of London and Dublin. The London “solution of hydrochlorate of morphia,” and “solution of acetate of morphia,” are twice as strong as the analogous preparations of the other two colleges.”

Other diversities might be pointed out; but these are surely enough to

show that if we wish to avoid fatal accidents, the attention of our Colleges is urgently required to this subject. The language of medicine should be the same in the three countries, especially in regard to compounds the use of which may cause danger to life. Some years ago, owing to a similar want of uniformity in the French Codex, several persons were poisoned under the prescription of a physician who had been accustomed to employ a weaker form of prussic acid than that in use in the infirmary to which he had been recently appointed. There is nothing in the climate of Edinburgh to render it necessary to use *prussic acid* of twice the strength of that of London or Dublin; nor is there any thing so peculiar in the constitutions of Englishmen as to render it indispensable that the preparations of *morphia* should be twice as strong as those found to be sufficient for the stomachs of Scotchmen and Irishmen. These differences may endanger life, unless care be taken by the prescriber to mark the nationality of the preparation which he selects. Inadvertence or forgetfulness may, however, lead to the omission of this precaution; and it is probable that some hundreds of practitioners are either not aware of the differences or of the degree to which the *similarly-named* preparations actually vary in strength. If fatal accidents have not already occurred from this want of uniformity, it is no reason why our collegiate authorities should delay those steps which are required for so necessary an improvement in our pharmaceutical system. The present plan is not merely dangerous to patients, but it is embarrassing to prescriber and dispenser; it places either or both under a risk to which they ought not to be exposed; and it daily exposes an Irishman to be poisoned in London by morphia, or an Englishman to be poisoned in Edinburgh by prussic acid.

Considering the position occupied by the three Colleges, it is clear that no satisfactory reason can be assigned for this diversity in our Pharmacopœias. We do not now express an opinion whether it is better, in a scientific or philosophical point of view, to employ the Edinburgh or London prussic acid: if the respective authorities cannot settle this point, and they agree with us that people ought not to incur the risk of poisoning in the interim, then there is an easy way of compromising the matter. Let the weaker preparations be taken as the most safe to the public under a change; and if Edinburgh will give up her prussic acid, Dublin her colchicum, and London her morphia, we shall be able to proceed amicably and safely, if not philosophically. Whatever is done, and whatever sacrifice may be made, there should be, without delay, a perfect uniformity throughout the three kingdoms in the strength of the powerful medicines to which we have above referred.

It would be superfluous to draw attention at any great length to the sanitary advantages that are derivable to the inhabitants of large towns by the appropriation of open tracts of land for purposes of health and recreation. The wisdom of our ancestors, when they preserved "commons" for public use, was in no degree inferior to our own when we set aside a certain number of acres of land contiguous to densely populated cities, and lay them out as parks. The inhabitants of the metropolis have long enjoyed the sanitary benefits of such public airing-grounds, and have testified their conviction of the gratification and benefits thence accruing by the urgent demand made for their multiplication. The favourable contrast presented by the mortality returns of the registrars of the districts adjoining the parks and squares of the

west end of London, as compared with those of the more thickly-peopled eastern, southern, and northern metropolitan districts, have furnished additional and cogent arguments in favour of the construction of parks in the last-mentioned quarters. The success which has attended the formation of the Victoria Park has formed the basis of a claim for a similar boon on behalf of the northern, or Finsbury district.

The rapid increase of the metropolitan population within the last ten years, is proved by the census to have taken place chiefly in the suburban, and especially in the northern districts. Thus, to take the instance of one parish alone, the increase is very striking when compared with the absolute decrease that has taken place in the central district of the metropolis:—

| | 1841. | 1851. |
|------------------|-------|-------------------------------------|
| Islington . . . | 55779 | 95154—increase in ten years, 69375. |
| City of London . | 56009 | 55908—decrease in ten years, 101. |

Virtually, therefore, owing to various causes, an emigration has occurred from the city to the suburbs, and this to so large an extent that the consequent increase of houses and streets has within a few years amalgamated neighbouring villages with London, and already threatens to create as dense a population in the suburbs as has hitherto existed within the city itself. So largely and steadily has this change been progressing, that it has long been evident that unless strenuous efforts were made for the formation of a park on the northern side of London, the only eligible spot for such an undertaking would speedily be covered by new buildings. That effort has been made, and has been attended with success. The Government has recognised the necessity of the proposal, and, happily, not having to negotiate arrangements through the Board of Health, it has promptly authorised the

Commissioners of Woods and Forests to proceed in obtaining surveys and plans for the formation of a park to extend over a hundred and fifty acres, the estimated cost of the freehold of which will be a hundred and fifty thousand pounds. That the application and the grant have not been made without good reason may be seen from the following table, which shows the great rate of increase in the population of the northern metropolitan district:—

| | 1841. | 1851. | Increase. |
|---------|--------|--------|-----------|
| North | 376568 | 490441 | 113873 |
| South | 503346 | 616545 | 113199 |
| East | 393067 | 485336 | 92269 |
| West | 301189 | 376332 | 75143 |
| Central | 374199 | 392986 | 18787 |

These figures, we conceive, furnish an unanswerable argument in favour of the sanitary advantages of the preservation of the open spaces which it is proposed to include in this park. The pecuniary outlay is but the practice of a sound economy, which, in dispensing the means of health and rational gratification to the masses of our densely populated town, produces a saving both to it and to the nation by the preservation of effective labour, and by the prevention of the losses incurred to the community by sickness and death through epidemic and endemic diseases.

Reviews.

A Practical Treatise on the Diseases of the Lungs and Heart, including the Principles of Physical Diagnosis. By WALTER HAYLE WALSH, M.D., Professor of the Principles and Practice of Medicine, and of Clinical Medicine, in University College, London, &c. &c. &c. 12mo. pp. 580. London: Taylor, Walton, and Maberly. 1851.

THE labours of the author of the work now before us, in the department of Thoracic Disease, are well known, and have deservedly gained for him a high reputation as a pathologist.

The principal features of this Practical Treatise are:—the large space devoted to the consideration of the means of physical examination of the organs within the thorax, comprising nearly one-half of the volume; the care and minuteness with which every morbid sound and sign are described and explained; as well as the clearness and conciseness with which every form of disease, its diagnosis and treatment, are described.

The “Physical Methods of Diagnosis,” with which the work commences, are—I. Inspection; II. Application of the Hand; III. Mensuration; IV. Percussion; V. Auscultation; VI. Succussion. In the employment of these methods the Chest is divided by the author into “anterior, lateral, and posterior regions. The *anterior* are called supra-clavicular, clavicular, infra-clavicular, mammary, infra-mammary, supra-sternal, upper sternal, lower sternal. The *lateral* regions are the axillary, the infra-axillary. The *posterior* regions comprise the upper scapular, the lower scapular, the infra-scapular, and the inter-scapular. Of these, the supra, upper, and lower sternal, are single; all the rest are double” (p. 3). A diagram exhibits the anterior regions, and the boundaries of each region are accurately described.

Relative to the physical examination of the lungs, the author first directs attention to the subject of *inspection*, whence, he shows, information is to be obtained regarding the form, size, and movements of the thoracic walls in health and disease.

The indications furnished by the motions of the chest-walls are more distinctly appreciated by the *application of the hand*; by which means, also, useful information is conveyed through the observation of fremitus or tactile vibration.

By *mensuration* any variation in the relative size or distances of parts may be detected. The most important of the admeasurements distinguished by Dr. Walshe are the following: on the level of the sixth cartilage, under the clavicle; from the clavicle to the most dependent point of the ribs; and, from the nipple to the middle line of the sternum. The author traces the variations of measurement induced by age, sex, and occupation. While discussing this subject, Dr. Walshe describes Dr. Sibson's Chest-

Measurer and Dr. Hutchinson's Spirometer.

By *Percussion*, the author observes, we learn the density of the subjacent organs, and this is inferred from the sound elicited, and the degree of resistance or elasticity yielded by the body percussed. The causes of the difference of sound produced by percussion are carefully discussed, as well as the means that have been used in eliciting percussion-sounds. Of the various Pleximeters that have been suggested, Dr. Walshe prefers the index finger of the left hand, or a flat piece of India-rubber: the mode of application, and the precautions to be observed in the use of either, are particularly described. The indications furnished by these means of diagnosis under different conditions of the thoracic organs in the several regions of the chest, both in health and disease, are related in detail.

In treating of *Auscultation*, the author discusses the comparative merits of mediate and immediate auscultation—the proper construction of the stethoscope—the precautions to be observed in performing auscultation—and then proceeds to treat, *seriatim*, of the sounds discoverable by auscultation, with the theoretical explanation of their physical causes. All these points, and many others which we have not space to enumerate, are very fully treated—perhaps with some little excess of refinement—so that there is scarcely a possible morbid sound, or morbid condition of the lungs, the auscultatory value and nature of which are not brought under the student's notice in this work.

The physical examination of the heart and great vessels is described with similar minuteness. The instructions herein given will be of the greatest value to the student, to whose attention we commend them, while we now direct our readers' notice more especially to the practical application of these principles and instructions to the study of disease in the several organs, as exhibited in the brief and lucid exposition of its various forms.

And, first, of *Bronchitis*.—This the author treats under the several divisions: acute, chronic, plastic, mechanical, hay asthma, influenza, and syphilitic bronchitis; and describes separately their diagnostic symptoms and treatment. The next disease which is brought under notice is *Pleurisy*. The anatomical

conditions of this Dr. Walshe divides into four periods,—viz., that of hyperæmia and dryness; of plastic exudation; of sero-purulent effusion, with or without dilatation of the side; and of absorption, with or without retraction of the side. The physical signs of these conditions are severally pointed out, and their treatment detailed. We observe under the latter head the expression of an opinion, to the correctness of which we cannot assent. With reference to the employment of paracentesis in Emphysema, Dr. Walshe remarks:—

“There are no existing data from which precise inferences may be drawn as to the success of this measure, whether considered generally, or in reference to its performance in particular states of the constitution. And this because observers have contented themselves with merely ascertaining the existence of effusion into the pleura of subjects operated on, without inquiring into the condition of the other organs, and above all, substantiating the presence or absence of pulmonary tuberculisation. How can a correct general inference be obtained, when patients are clubbed together, who have simple chronic pleurisy, or this combined with carious destruction of the ribs,—who have or have not serious organic disease in other regions of the body,—whose lungs are sound, or the seat of active tuberculous disorganisation?” (p. 304).

It was with some surprise that we read the author's statement that there are no existing data from which we may infer the success of the operation: we should scarcely have supposed that Dr. Walshe could be unacquainted with the valuable papers on this subject, although unnoticed by him, by Dr. Hughes, of Guy's Hospital, published in this and in other periodicals. Among these we may refer to a paper in a recent number of the *Edinburgh Monthly Journal*, where a completely successful case is related, in which recovery took place, although effusion to the extent of several pints of a *really purulent* character had twice collected. The author appears to doubt the possibility of such an occurrence. We are disposed, from the success that according to our personal knowledge has attended the operation, to place a higher estimate thereof than is awarded to it by Dr. Walshe.

Dr. Walshe divides Pneumonia into the usual three stages of engorgement, red hepatization, and grey hepatization.

The physical signs, and the variations corresponding to the different anatomical conditions of the organs, are well described.

In speaking of venesection, among other therapeutic measures, Dr. Walshe points out the degree to which this may be practised. Indeed, we may observe that throughout this work one feature may be recognised which is characteristic of the present state of medicine,—viz., the caution and moderation with which depletion is now practised.

Pulmonary Hæmorrhage is next brought under notice. In the treatment of pulmonary apoplexy, the author has met with the greatest success from extensive and repeated dry-cupping, next to which the most important remedies are counter-irritation and free purgation.

The author enters with much precision into the connections and relations of hæmoptysis with tubercular disease of the lungs. Its diagnosis from hæmatemesis is also very accurately described. The treatment of hæmoptysis is resolved into—*a*, removal of the conditions causing it; and *b*, arresting it, in spite of these conditions. Dr. Walshe does not mention oxide of silver among the direct astringents to be employed for the latter of the two indications; this remedy is, unquestionably, a most powerful means of arresting hæmorrhage, and we think there is reason to regret that it is not more extensively used.

Dr. Walshe places Œdema of the Lungs among the "Alterations of Secretion:" this can scarcely be considered a correct classification, when we consider that the majority of cases of œdema of the lungs consist in a simple serous infiltration,—a part of a general dropsy depending upon disease of the heart; the cases being comparatively few in which it can be said to attend bronchitis or pneumonia, except this term be extended to the expression of an early or late stage of these inflammatory conditions.

Pneumothorax, the author allows, may sometimes occur as the result of a process of secretion in certain cases of pneumonia; but, as he very truly remarks, in the immense majority of cases it is the effect of traumatic injury to the wall of the chest, or of perforating disease of the lungs. These cases are clearly described by the author, as are

also the few means at our disposal for their relief.

Phthisis is divided into acute and chronic, the latter being treated under the three stages of deposition and induration, softening, and excavation. A very admirable summary of the author's opinions, and facts relative to this disease, is here presented.

The remaining diseases described in this chapter are Cancer of the Lungs, Spasmodic Asthma, Hooping Cough, and Intra-thoracic Tumour.

The succeeding chapter is devoted to the consideration of Diseases of the Heart, and is followed by that of Diseases of the Aorta; both chapters bringing before the student an exceedingly clear and condensed summary of the principal practical points in the histories of these maladies.

We regard this volume as a valuable addition to the literature of thoracic disease, and one upon which the student should set a high estimate, since it contains, perhaps, the fullest and most accurate description of the signs of disease of the thoracic viscera that has yet been published: indeed, if any fault could be found, it would be, as we have already intimated, that the author is disposed to refine too much on the physical examination of the lungs, heart, and great vessels,—somewhat, we fear, to the detriment of those portions of his work which are specially addressed to the treatment of these diseases.

Sleep and Dreams: Two Lectures delivered at the Bristol Literary and Philosophical Institution. By J. ADDINGTON SYMONDS, M.D., Consulting Physician to the Bristol Infirmary. 8vo. pp. 90.

WITHOUT affirming that these Lectures convey any strikingly novel views on the nature of sleep and dreaming, we can aver that they contain the most eloquent and interesting exposition of their phenomena that we have met with for a long time. We are not surprised that the well-educated audience before whom they were delivered should have requested their publication, that they might have the opportunity of perusing and more deliberately studying the mass of scientific knowledge, strict reasoning, and extended erudition, therein put before them, than was possible in the course of the delivery of a lecture.

We can scarcely, within our limits, present our readers with a satisfactory analysis of a composition, every part of which is so closely consecutive, that a separate extract would be damaged by isolation. We must refer our readers to the Lectures themselves, if they would enjoy the luxury of a good style, as well as reap instruction from an accomplished physician.

On the Diagnosis of Inflammatory Diseases of the Cervix Uteri, and on the Use of the Potassa cum Calce in their Treatment. By J. HENRY BENNETT, M.D., &c. Pamphlet, 8vo. pp. 11. London. 1851. (Reprinted from the London Journal of Medicine.)

THE following extract sufficiently points out the nature and object of this publication:—

“It is not my intention in the following paper to enter at any length into the consideration of the symptoms of inflammatory disease of the neck of the uterus, but merely to give a brief and concise analysis of those symptoms, and of those moral rules, which guide me in cases requiring surgical examination and treatment. In the second edition of my work on *Uterine Inflammation* I have already described the semeiology of these affections at such length, and with so strict an adherence to nature, that it would be mere repetition to do more. Indeed, although I have now had several years’ additional experience since it was written, I find that I have but little to add, and nothing to alter” (p. 1).

As we have on a former occasion fully noticed the work to which Dr. Bennett here refers, it is obviously quite unnecessary that we should occupy our space by any further notice of the present publication. We must, however, observe, that, amply as the evils of the abuse of *speculation* have been exposed by others, a less confident style of expression than is exhibited in this paper would have been more befitting a physician of Dr. Bennett’s experience and standing.

On Bubo and Perinæal Abscess. By JOHN L. MILTON, M.R.C.S. Lond. Pamphlet, 8vo. pp. 32. 1851. (Printed for private distribution.)

MR. MILTON has printed this pamphlet for the purpose of showing that bubo is curable in *most* cases without surgical interference, and in all without cutting

or disfiguring the patient. His treatment of acute bubo is chiefly absolute rest, full doses of tartar emetic, and fomentation by means of hot water. Other subsidiary measures are mentioned in reference to particular cases. In suppurating bubo the author evacuates the pus by repeated use of a grooved needle, instead of by incision, and administers iodide of potassium internally, painting over the bubo, when it becomes indolent, with tincture of iodine, or applying a blister on the surface.

For perinæal abscess Mr. Milton advises the same energetic use of tartar emetic which he has found serviceable in acute bubo. The author reprehends the practice of “bringing forward” the perinæal abscess by “bark, wine, and good diet,” as advised in some works on surgery.

An Address delivered before the Suffolk District Medical Society at its Second Anniversary Meeting, Boston, March 28, 1851. By SAMUEL PARKMAN, M.D., M.M.S.S., one of the Surgeons of the Massachusetts General Hospital. Pamphlet, 8vo. pp. 40. Boston, U.S. 1851.

THIS Address, like many others delivered on similar occasions, is “published by request;” but we do not say without cause. It constitutes, indeed, a very eloquent exposition of the present tendency of investigation in medicine, which the author indicates to be more particularly the discovery of the real nature of disease made known in the minuter actions of the economy, as revealed by the aid of chemistry and the microscope, as the only safe grounds of therapeutic measures. Instead of confining itself to watching the effects and proofs of disease, the medical inquirer now scrutinises more closely the nature and causes of those effects. The treatment of disease will be modified and regulated by these researches and discoveries; and in this application of means in subservience to the guidance of an improving pathology, the real advance of medical science must—at least for some time—consist. The Address, in which Dr. Parkman has fully and ably set forth these views, will be read with interest, and will probably suggest reflections that may be fruitful in practical results.

Proceedings of Societies.

NEWCASTLE AND GATESHEAD PATHOLOGICAL SOCIETY.

April 1851.

DR. CARGILL presented a

Malignant Disease of the Liver and other Glands, with a Cavity at the summit of the Lung obliterated by Cicatrisation and Earthy Deposit.

The following are the particulars of the case:—W. D., a scaman, aged 33, was admitted into the Newcastle Infirmary, July 25, 1850. He had been in twice before, under Dr. Cargill's care, for liver affection, and had gone out considerably relieved. The symptoms accompanying the last attack were—Very frequent pain in the back, extending round to the epigastrium; flatulence, which often came on in paroxysms; bad appetite, and painful nausea occasioned by taking any food; countenance anxious, and having that dusky icteric tinge which we so often find associated with malignant internal disease. At the early stage he had much constipation, which gave way at a more advanced period to very frequent diarrhoea. This was accompanied by intestinal pain and much depression of spirits. The urine high-coloured, and with lithic acid deposits. The tongue never indicated anything particular. The voice has been husky and weak for the last seven months of his life, during the greater part of which time he has been an out-patient. Progressive emaciation has been visible to us all along; but it was remarkable that, in November and December, he got so much better as to walk about with pleasure, and to fancy he might recover. His appetite at this time, and for months after, was rather preternaturally good, but he still had recurrence from time to time of the abdominal pain, diarrhoea and nausea, and occasional bilious vomiting.

In the beginning of February his urine became more scanty and high-coloured, and ascites came on. This was soon followed by œdema of the extremities, and, although the desire for food continued, whatever he took produced nausea and frequent vomiting. On the 10th of March he was, at his own urgent request, taken into the house and tapped next day, after which he got weaker gradually, and sank on the 14th.

Post-mortem examination 24 hours after death.—Much emaciation. A good deal of fluid in the abdomen. Liver greatly enlarged, weighing $4\frac{1}{2}$ lbs.; pushing up the diaphragm, and extending to the fourth

rib; its external surface unequal, and presenting several nodules of yellow, firm, cancerous deposit immediately under the capsule, the largest about the size of a pigeon's egg; its internal structure was permeated throughout by the same masses, giving it a very hard consistence. *Peritoneum* generally covered with lymph, by which the various convolutions of the intestines were glued together. The stomach and other organs of the abdomen, with the exception of the pancreas and mesenteric glands, were healthy. The *pancreas* and the mass of *mesenteric glands* in the surrounding neighbourhood were entirely disorganised by, and occupied with, a large scirrhus tumour of the size of two fists, having its base resting on the spine, and implicating the large visceral vessels as well as the root of the liver. This mass was firm externally, and cartilaginous, but soft and brain-like internally, yellowish-white in colour, and presenting no vascular tufts in its interior. The tissue was composed of a fibrous stroma, with innumerable compound granular cells under the microscope, much exudation granular matter being infiltrated between the fibres.

A curious pathological fact was made manifest by the apex of the right lung being occupied by an anfractuous cavity greatly cicatrised, and the small hollows which remained being filled quite up with calcareous matter, two of them being of the size of marbles, and a general puckering showing itself as though it had been at one time a cavity of good size, but had subsequently been cicatrised, with the exception of those parts which were stuffed firmly with the soft calcareous matter. It was stated, a day or two before his death, that some years ago, when ill at Edinburgh, a physician there had said that there was a tubercular cavity at the top of the right lung. *Heart* sound, but flabby in texture.

The treatment was varied to meet the often changing symptoms as they arose from time to time. The chief remedies were Hyd. c. Cretâ and Dover's Powder; ox-gall and taraxacum, with hyoseyamus, exhibited with aperient enemata when constipation existed, and opium, with chalk in the solid form, during the opposite state. At one time, when the urine was scanty and high-coloured, diuretics—such as supertartrate, nitrate, and carbonate of potass, with spirit of nitre—were found of considerable use; and effervescent medicines, with repeated doses of hydrocyanic acid, were the most effectual in restraining the vomiting.

The following particulars of a case of *Calculi in the Urethra and Stricture* were communicated by Dr. BARKUS:—

Thomas Atkinson, æt. 47, was seized, on the 19th of July, 1851, with retention of urine and extravasation into the cellular tissue of the scrotum. Free incisions were made into the cellular tissue of the scrotum, which gave issue to pus and urine. Repeated and unavailing efforts were made to pass a catheter: the smallest instruments would not pass further than the bulb of the urethra, or a little anterior to it. Typhoid symptoms set in. There was extensive sloughing of the scrotum. The urine passed by the openings in the latter, and scarcely any by the natural channel. In a few days the sloughs separated, and the wounds became clean. The man's general health improved. Up to this time (March 2d) all efforts to pass a catheter failed. To-day the point of the instrument came in contact with a calculus near the bulb. An incision was made down upon the stone at the junction of the scrotum and perineum, and it was extracted. All efforts from this time up to the 13th in passing a catheter were unsuccessful. The urine continued to flow by the openings in the scrotum and perineum. The man's general health somewhat improved. I now proceeded to make a division of the stricture, which appeared to occupy the whole urethra to the prostate. The man was placed under the influence of chloroform, and in the position for lithotomy; and, assisted by my friends Messrs. Gibb and Pearce, I proceeded to operate. An incision was made down upon the point of the catheter immediately behind the bulb, and continued, with the aid of a director and the point of the catheter, along the urethra to the prostate gland, which was found to be occupied by a stone, and almost completely absorbed. After division was made of the prostate, a calculus of the size of a filbert-nut was extracted. The former calculus was about the same size. The catheter No. 6 passed freely into the bladder, which was well sounded without detecting a stone. The catheter was allowed to remain in the bladder for four days, when it was taken out, and has been introduced for a few hours each day until now, April 6th, twenty-four days after the operation. The incision in the perineum is almost healed, and he passes most of the urine by the urethra. His general health is much improved. He passes nearly a full sized stream of urine, and has no difficulty in emptying his bladder.

Mr. GEORGE HEATH exhibited a patient on whom he had performed

Tracheotomy,

and said that the subject of this case was a married woman, aged 29, a patient of the Newcastle Eastern Dispensary.

Some years ago she had suffered from some secondary venereal affection. A few months previous to her application to the Dispensary she had a severe attack of illness affecting the chest, for which she was blistered and had leeches applied.

At the time she became a dispensary patient she had some cough, shortness of breath on going up stairs or walking fast, and she spoke and breathed at all times after that peculiar fashion so characteristic of narrowing and roughness about the entrance of the wind-pipe. There was also a spreading ulcer on one leg of unmistakable syphilitic character: for this she chiefly sought advice. She was given some croton oil liniment to apply to the sides of the throat, and nitric acid lotion for the leg. A week after her visit to the Dispensary she was laid up with great difficulty of breathing and increased cough. From this attack she recovered under the use of blisters, tartar emetic, and calomel. The gums were still slightly sore when I was requested to see her on account of another similar attack.

She was now suffering so much from difficulty of breathing, anxiety, and constant loss of sleep, that, unless some short and effectual mode of relief was practised, it was evident that exhaustion alone would soon wear her out, if sudden suffocation did not destroy her more rapidly. I therefore requested my colleague Dr. Glover to examine her with me, in order to ascertain how far the lungs or bronchial tubes might be implicated. Dr. G. agreeing with me that no disease of importance existed in the chest, the opportunity afforded the same day by a severe seizure, in which suffocation was imminent, was taken to propose the operation of opening the trachea. The patient consenting, this operation was put in practice. The instruments used were a scalpel, dissecting forceps, blunt hook, and tracheotomy tube. The patient being placed opposite the light, the incision through the integument was begun immediately above the upper border of the sternum, and carried upwards in the median line for about $1\frac{1}{2}$ inches. After dividing the fascia, the sternal muscles were separated, and the windpipe opened by a longitudinal incision upwards implicating the trachea: no part of the trachea was removed. One edge of the opening into the wind-pipe being held aside with the blunt hook by my pupil Mr. Hutton, the tube was inserted and secured. There was but little hæmorrhage: a drop or two of blood, however, entered the windpipe at the moment of opening it, and gave rise to some spasmodic cough and considerable struggling; but as soon as the tube was inserted the breathing became

quiet and easy, all struggling ceased, and the countenance lost the expression of intense anxiety and distress which had previously been so remarkable. After being put to bed, the patient was instructed how to cough through the tube: a looking-glass was placed beside her, a few strong feathers, and a silk handkerchief. By means of these implements she was able to examine for herself the state of the tube and to keep it clear. She slept quietly and well the first night after the operation, and, with the exception of a slight attack of bronchitis easily subdued, there occurred nothing to interfere with her recovery. She has never been able to dispense with the tube. For some time after the operation the voice continued husky, and there was occasional expectoration of matter tinged with blood; it was, therefore, not then thought safe to remove it. When a month had elapsed, as the expectoration had ceased, and the voice much improved, an attempt was made to restore the respiration to the natural channel. She could not bear the passage of bougies up the trachea through the glottis, but a cork was inserted into the mouth of the tube, and, as for a week she seemed to breathe easily through the larynx, at the termination of that period the tube was taken out. The wound soon healed, but, four or five days after the removal of the tube, great difficulty of breathing again supervened. I was sent for in the night, and, finding her livid in the face, and apparently dying, a scalpel was pushed through the cicatrix into the trachea, and the tube re-inserted. Since that time she has declined any attempt to dispense with the artificial opening. At the present time, about two years since the operation, this patient, as the members of the Society may perceive, enjoys excellent health, and is capable of performing all the duties of life. She wears ordinarily a thin handkerchief round the neck. There is no particular liability to cold. When the tube is open her voice is reduced to a mere whisper; on closing it she can speak loud and distinctly.

Dr. HUMBLE presented a beautiful specimen of

Hypertrophy of the Pyloric Orifice of the Stomach simulating Scirrhus,

in a man, aged 65, a farm labourer, who had always enjoyed good health until about twelve weeks before his death, when he had an attack of what was called inflammation of the bowels. From this he partially recovered, and resumed his usual employment, but continued to vomit his food

daily. When admitted under Dr. H.'s care, he was much emaciated, and his countenance presented a pinched and anxious expression, with the peculiar sallow hue of organic visceral disease. In addition to the vomiting, he complained of pain at the epigastrium, which was also tender to the touch. The pain was much increased about an hour after taking food, and was only relieved by vomiting. No hardness could at first be discovered; but after a few weeks, as emaciation proceeded, a distinct tumour was felt over the region of the pylorus. He also suffered much from thirst, with acid and fetid eructations. His bowels were obstinately constipated, and could only be acted on by large and frequently repeated injections. He took sedative and other medicines without much relief, and died after having been under treatment for about six weeks.

On examination after death the pyloric extremity of the stomach was found much thickened and indurated, to the extent of about three inches round the orifice, which was, however, little diminished in size, and could not therefore have offered much *mechanical* opposition to the passage of food into the duodenum. The mucous membrane was much thickened, and had a puckered appearance, being thrown up into large rugæ. The muscular coat, in which the thickening chiefly appeared, was much hypertrophied, and extremely dense and hard, with white streaks having the appearance of fibrous bands intermixed: it was nearly uniform in thickness, and could be readily separated from the mucous coat. Under the microscope it presented a condensed fibrous appearance, the fibres seeming to be more closely pressed together than is the case in the healthy state of involuntary muscle. The white streaks were found to consist entirely of a deposition of fat. In the submucous cellular tissue there was an amorphous granular deposit, which might possibly, in the event of the patient's life having been prolonged, have formed a nucleus for true cellular degeneration.

This case might have been confounded with true fibrous cancer, were it not that there was no fusion of the mucous with the muscular coat—no increase of the submucous cellular tissue. The swelling was uniform in appearance, presenting no lobulated protuberances on the inner surface of the stomach; and the microscope revealed the absence of cancer-cells. It therefore appears to have been a case of simple hypertrophy, with induration of the coats of the pyloric extremity of the stomach. The other parts of the organ were healthy, and no similar deposit was found in any other texture.

Dr. HUMBLE also exhibited a

Scirrhus Affection of the Pyloric End of Stomach,

in a married female, aged 56, who had suffered for several years from dyspepsia, and so much so during the last three years as to require constant medical treatment. For the last seven months she has been under Dr. H.'s care, during which period she vomited her food almost invariably, and also frequently large quantities of fluid resembling coffee-grounds. She complained chiefly of pain, which she described as a *boiling* at her stomach; and she also suffered much from diarrhoea. A circumscribed hard tumour, tender on pressure, was distinctly felt over the pylorus. She had lived almost entirely upon tea; but for some time previous to her death the only thing which remained with her was a small quantity of milk, with the addition of a tea-spoonful of rum. She had not been accustomed to the use of ardent spirits, and, as she seemed to feel relief from this mixture, she was allowed to continue it. She was not benefitted by the use of large doses of opium; which seemed to increase her nausea and vomiting. These symptoms were almost invariably checked by the administration of the saline effervescing mixture containing hydrocyanic acid, and a few minims of tincture of opium. The diarrhoea was for a long time very unmanageable; but it was at length controlled by grain doses of the sulphate of copper, given every three hours, with a small quantity of opium. She had intervals of comparative freedom from pain, and was able to take exercise out of doors until about three weeks before her death. During this period, however, although she had no diarrhoea (her bowels having become constipated), her emaciation and debility increased most rapidly; and after repeatedly vomiting large quantities of the black-looking fluid already alluded to, she died, completely exhausted, on the 14th day of March last.

On examination twenty-four hours after death the body was extremely attenuated, and not a particle of fat was found in any part of it. The stomach was much larger than natural, and contained nearly two quarts of dark, grumous, coffee-ground looking fluid, similar to that which she had frequently vomited. The pyloric orifice was so narrowed by a mass of scirrhus induration which surrounded it as barely to admit the passage of a probe into the duodenum. The induration was about three inches and a half in length and one and a half in thickness: it projected backwards, and was united to the head of the pancreas by a firm adhesion, apparently of long

standing. It also projected into the cavity of the stomach by an irregularly nodulated surface, on which was found a deep ulceration immediately above and in front of the remains of the pyloric orifice. This ulceration was irregular in form, about the size of a shilling, and gave way so as to form a perforation on raising the stomach in the act of removing it. The mucous membrane was much congested, to the distance of about four inches in every direction from the pyloric orifice; the rest of the organ being tolerably healthy in appearance. A microscopic examination of the mass showed it to be of a true carcinomatous nature, the irregular shaped cells of cancer being distinctly demonstrated. Immediately surrounding the peritoneal covering of the tumour were found several glandular-looking bodies, consisting almost entirely of cancer-cells, and beginnings, probably, of tumours which might have eventually become adherent to and incorporated with adjacent organs,—such as the pancreas and liver. The remaining abdominal viscera were free from any carcinomatous deposition.

Dr. HUMBLE exhibited a specimen of
Typhous Ulceration of the Small Intestines,

from a man who died in the Fever Hospital, on the 20th of March. He was a Russian sailor, who had been five weeks ill, with the ordinary symptoms of continued fever, no indications of typhus having presented themselves until three days before his death. On examining the abdomen, the intestines generally had a dark and congested appearance; the parietal peritoneum being healthy, except at one spot, where it had come in contact with one of the most discoloured portions of the ileum, and here it was quite black. The peritoneal surface of the stomach was natural, but its mucous surface showed much venous congestion towards the pyloric extremity, and also along the greater curvature, more especially in the immediate vicinity of the spleen. The duodenum and jejunum were natural, with the exception of slight congestion at the commencement of the former. The peritoneal surface of the ilium presented various blackened patches, particularly towards its termination; the mucous surface was extensively ulcerated from its termination in that of the colon to a distance of five feet eight inches (the portion exhibited). The ulcerations amounted to twenty-eight, and the whole of this mucous surface was of a darkish red, assuming a purple, nay, almost a black colour, in the vicinity of the ulcerated spots. The ulcers varied in form, some being round (the solitary glands), while others were elliptical,

indicating most probably the situation of the agminated glands of Peyer. They also varied in size, some of them not being larger than a small pea, while others attained the size of a half-crown piece. The mucous membrane around them was thickened, giving some of them an appearance of greater destruction of the mucous membrane than was really the case. Some were very superficial, while others were so deep as to leave merely the peritoneal coat: in fact, an artificial perforation was made in one or two instances, by merely raising the intestine to examine it. The ulcerations increased much in number towards the termination of the ileum, and were found in various portions of its circumference, but chiefly opposite the junction with the mesentery. The mesenteric glands were enlarged, rather harder than natural, and of a bluish-red colour. The peritoneal surface of the caput cæcum was united to the parietal membrane by an adhesion apparently of long standing. The mucous surface of the colon was, for a considerable distance, deeply congested, and that of the ileo-colic valve ulcerated, while, a few inches further down, a distinctly abraded surface was found on the summit of two of the rugæ. These abrasions were about one inch long, and about one-third of an inch broad. The colon contained a considerable quantity of fæculent matter, perfectly natural and healthy in appearance. The liver was of natural size, but with a considerable deposition of fat in its structure. The spleen was large and soft, consisting of a dark-red, almost pultaceous mass, readily breaking down under the finger. The remaining abdominal organs were healthy. The heart was large and flabby, its right side loaded with fat externally. The other thoracic organs were in a normal condition.

It appears very singular that the typhous process should have passed through all its stages, that the mucous membrane of the small intestines should have become congested to such a great extent, and that ulcerations of such magnitude as those above described should have taken place, and yet almost all the symptoms of such important lesions be wanting. He had no delirium, no approach to coma, or even to drowsiness, and appeared sensible to the last, having used the night-chair a few hours before his death. Petechiæ did not appear until three days before the termination of the case, his teeth at the same time becoming covered with sordes. His tongue, until the same period, continued moist and covered with a very slight fur; there was no morbid redness, with accompanying dry fur, nor was it at any time abnormally smooth. The only symptoms which could

have led to a suspicion of abdominal mischief were the anxious expression of countenance for a few days before the appearance of the petechiæ, and a slight tenderness on firm pressure over the right iliac region, but with this, his bowels continued to act regularly, and his evacuations to be fæculent to the end. His stools were very carefully examined daily, but neither blood, mucus, nor anything was found to indicate irritation, much less disorganization of the mucous membrane. It is true there was little mischief in the colon, except at its commencement, and the contents of the small intestine would not be hurried on by frequent desire for defecation and accompanying tenesmus, which would probably have been present had either the colon or rectum been much implicated, and thus time would be given for the formation of genuine fæces. But the total absence of hæmorrhage in such a case is very extraordinary, and seems difficult to account for by any hypothesis whatever.

Mr. J. S. PEARSE communicated the following case of

Paraplegia.

T. W—, æt 36, a stone-mason, was attacked with paraplegia in September, 1848. As he was walking home, he felt his legs gradually losing their power and feeling, and it required the assistance of a friend to support him. He grew gradually worse, and was subjected to a variety of treatment, repeated blisters over the spine, &c. &c., but without any very marked beneficial effect. In March 1849, he came under my care, and with little hope of doing him much good. I prescribed T. Ferri Mur. $\mathfrak{m}\mathfrak{x}$. three times a day, gradually increasing the dose unto $\mathfrak{m}\mathfrak{x}\mathfrak{l}$.; he began slowly to improve, but in June he felt so bad that he could not leave his bed. On the third morning after taking to his bed, he rose, and, to his own and wife's astonishment, walked across the floor without any support,—in fact, well; from this time he increased in health and strength, returned to his work, enjoyed as good health, and walked with as firm a step, as ever he did in his life. He then told me that it was not my medicine alone that had cured him, but that he had also taken a great deal of steel drops at the same time. He took, he said, sometimes as far as a teaspoonful three times a day (they are T. Ferri Mur.), so that together with what he took from me he must often have taken $\mathfrak{z}\mathfrak{j}\mathfrak{s}\mathfrak{s}$. three times in a day.

In April 1850 he got typhus fever, and was very severely held, being ill six months: on recovering he was left with paraplegia. He returned to me with a tottering gait, asked for the same medicine, saying he had

perfect confidence in it: he has continued to take it, is doing well again, and will probably soon recover.

The questions which arise are,—What was the condition that gave rise to the paralysis? Can it take place without some actual change in the structure of the nervous tissue? Is there such a thing as functional paralysis?

Mr. DENHAM exhibited an extensive
Cancerous Ulceration of the side of the Chest,

taken from the body of a woman who had had as many as six complete operations performed upon it, the disease, nevertheless, always returning before the wound was entirely closed.

Mr. GIBB presented two specimens of
Bright's Disease of the Kidneys,

taken from a patient of Dr. Bulman's in the Newcastle Infirmary. The kidneys were slightly smaller than natural, indurated, consisted almost entirely of the compound exudation fat globules, and presented scarcely any remains of the natural structure. The most curious circumstance was the fact of the renal vein of each kidney being completely blocked up with firmly-organized lymph, even from their junction in the vena cava to their minute branches of origin in the kidneys. The lymph was evidently very old, and although very firm on the first inspection, and of a brownish white colour, broke down in shreds of an unhealthy fatty character when crumbled under the finger. The disease was the result of a dose of turpentine taken for tape-worm about six months before death. Nephritis would appear to have been induced by it, and death was preceded by the usual chronic dropsy, and the poisoning symptoms of urea in the circulation. The urea was found in the exuded serum within the ventricles of the brain, as well as in the blood.

Hospital and Infirmary Reports.

ROYAL FREE HOSPITAL.

Reported by MR. GAY.

Necrosis of the Rib of twenty-four years standing—Removal of the Dead Bone—Cure.

It is not often that we have the opportunity of recording a case so remarkable as the following, which is not merely interesting in its history, but also valuable for

the light it throws on the pathology of these accidents, and on the necessity or non-necessity for the intervention of surgery where the constitution cannot triumph over, although it can bear up against, the disease.

Many writers and surgeons of high standing have held the opinion that, when the vitality of a bone was so seriously compromised that no hope remained of its being possibly saved, the necrosis and exfoliation which ensued were salutary processes, and ought to be left to the operation of nature, unless the constitution were likely to suffer too severely. Of late, however, and especially since the introduction of chloroform has removed one grand obstacle to operating—the dread of the pain to be encountered—a contrary opinion has materially gained ground, and the prevailing view seems rather to be, that all portions of bone irremediably injured should be removed as soon as possible.

But as the line of practice is not as yet in all cases completely laid down, and as different opinions will always be held concerning every fact, however simple and palpable, we subjoin the case as fully as our limits will allow, convinced that the only data that can supply a correct decision are to be drawn from practice, and more especially from that seen in our hospitals.

W. John S., a labourer, aged 34, residing in Finsbury, was admitted Sept 9th, 1851, under Mr. Gay, for the following circumstances. For the particulars of the case we are indebted to Mr. Lane, the house-surgeon.

Four-and-twenty years ago, when a boy, he was thrown from a horse, and fell heavily on his right side. After the first effects of the fall had passed off, three months went by without anything further occurring. An abscess then formed over the spot where his side had been most severely hurt, which burst and discharged pus for four years. As this healed up, an abscess, probably vicarious, formed in his leg, which also burst, and discharged for twelve months. Then this healed up, and the abscess in his side opened afresh and continued to run, resisting all the efforts made to heal it, discharging sometimes thick and sometimes thin matter. It gave way, however, once to a considerable extent during a severe attack of catarrh, followed by a very copious expectoration.

About ten years ago he began to spit up blood, which he describes as being shot from his mouth on coughing, at various intervals, for five months. Since that time small pellet-like masses of it are occasionally discharged on coughing.

Two days after admission Mr. Gay made an incision an inch in length over the

carious bone along the course of the rib, and removed it entire. It was about two inches long, flat, thin, and hard, and contained a cavity lined by soft, fine granulations.

From that time up to the present date the cure has progressed rapidly and steadily, the only medicines required being some remedies for the cough he was troubled with, and which he had laboured under for a fortnight previous to entering the hospital. In fact, he was suffering a good deal from an irritable, disordered state of the gastro-pulmonary mucous membrane, as his expectoration was occasionally tinged with blood, and he complained of symptoms of dyspepsia. He is now so far advanced towards a cure that a further detail of his state would be a work of supererogation: suffice it to say, that the wound is just cicatrised, and that the patient is getting strong and well.

Disease of the Elbow Joint—Mr. Gay's New Treatment—Cure.

Amputation of the whole limb, excision of the articulating surfaces, and the bringing about of ankylosis, are the three modes which have been hitherto resorted to, not to cure diseased joints, but to prevent the constitution from sinking under the drain of a disease but too often found incurable, and to render the portion saved in some degree useful to the individual.

Amputation, sweeping a remedy as it is, unfortunately but too often proves like the others inadequate to save the life of the patient; in many cases it hurries him to his grave, and shows only too forcibly how powerless our ordinary remedies are. Were it even of itself capable of always effecting a safe and complete cure, the mutilation it inflicts would ever prove a great obstacle to its employment. Excision of the articulating surfaces, which has saved many a limb that would otherwise have been amputated, has proved fatal in some cases, has succeeded but indifferently in others, and is tedious not only as regards the operation, but also the after treatment.

It is almost needless to say, that in a vast many instances all ordinary means of curing these diseases fail. Rest, splints, bandages, tonics, change of air and diet, mercurials, iodine, all fail to stay the progress of the disease, until it no longer becomes a question as to whether we shall have recourse to the knife or not, but how soon, and in what way, it is most advisable.

Mr. Gay has for some time past been in the habit of treating cases of diseased joints by a plan which has so far been found to be at one and the same time simple, rapid, and effectual. It is nothing

more or less than to make one or more incisions right down to the diseased joint with a view of letting out the debris of the diseased articulation, the remnants of the cartilages, &c., which seem to him one of the principal obstacles to the procuring of ankylosis; a healthy inflammation is by these means set up in the cavity, which speedily results in firm and complete ankylosis. The constant success which has attended this plan seems calculated to bring about a complete revolution in the treatment of these complaints, and we hasten to lay before our readers details so full of interest.

J. T., a labourer, entered the Royal Free Hospital, under Mr. Gay, August 28th, 1851, with disease of the elbow-joint. Of its origin and cause he knew nothing, and only remembers that it began about seven years, and that since then it has run its course unchecked by any means. On admission, the state of the limb was as follows:—the arm was straightened and the elbow joint almost immovable, even the slightest attempt to procure motion being followed by excessive pain. The joint itself was very much enlarged, but the remaining extent of the limb was wasted to a considerable extent. There were six sinuses leading to the joint, two on either side, one in front, and another on the inner side of the olecranon. Around their orifices the skin was livid and unhealthy-looking, and they all conducted direct to the joint, so that the probe passed immediately into it. A quantity of thin, ichorous fluid was constantly poured out from them. The man's health was much impaired, and although he had refused his assent to amputation, which had been proposed to him while an inmate of another hospital, he was now willing to lose his limb, or, indeed, undergo any operation which seemed likely to free him from his constant sufferings.

On the 1st of July, although the state of the joint seemed to hold out scarcely the remotest hope of success, Mr. Gay made an incision on either side, carrying it along the course of the lateral sinuses, and fairly down to the joint. These incisions were each four inches long, and left behind great gaping wounds, laying open to view the interior of the joint. The ends of the bones were found completely bereft of cartilage, and so soft that portions were as readily torn away by means of a steel director as if they had been so much cork. But little bleeding followed the operation, which was concluded by filling up the cavities with lint, and confining the joint with a bandage. The first thing that ensued was a most profuse discharge, which continued un-

abated until about nine days after, when it gradually began to lessen, owing to the evident healing of the wounds, which now appeared strongly disposed to closeness. By the 29th, considerable progress had been made, but now the patient was, most unfortunately for himself, seized with simple fever. The wound rapidly assumed an unhealthy appearance; the joint was attacked with acute pains, and great quantities of thin dirty pus were poured out in place of the previous small amount of healthy secretion. The tongue grew furred, the skin dry and hot, whilst the pulse sank and quickened. His sufferings became very great, and in the course of twenty-four hours the sores had so increased, both in depth and extent, that the joint was almost laid bare. At this stage the patient most urgently entreated the removal of the arm, and Mr. Gay had almost decided, seeing the unfavourable turn matters were taking, on doing so as soon as the man's health should be somewhat recruited. But better things were in store for him. Active and judicious general treatment was resorted to; the patient's strength was carefully kept up by good diet, and the greatest attention. The secretions were vigorously watched over, and every effort strained to prevent him from sinking. On the fifth day a grain of opium with mercury and chalk was ordered three times a day, as there were no symptoms of local congestion; this relieved him greatly.

The joint was now constantly enveloped in poultices. On the ninth day the fever had left him, but in a very weakened state, and the wound began again to discharge healthy pus, and to show a tendency to granulate. He was ordered tonics, and an improved diet.

From this time the progress of the case was much more favourable and rapid than any one could have anticipated. The wounds began to close, and the discharge perceptibly lessened. Complete closure of the edges of the wounds was, however, studiously prevented by inserting pledgets of lint between them, and the joint was now as firmly bandaged as the patient could bear. By the 12th of September the wounds had completely closed, and ankylosis of the joint had taken place. An abscess, however, formed beneath the skin on the outer side of the joint; it was opened, and soon healed firmly up. Ankylosis took place, evidently enough at first by means of a soft, perhaps fibrous tissue, and hence some degree of motion was retained in the joint; latterly, however, this has ceased, and the uniting medium has apparently become ossified; at least its hardness and immobility would lead to such a conclusion.

Correspondence.

ON THE CLASS OF MEDICAL LITERATURE MOST NEEDED IN THE PRESENT DAY. ADDRESSED TO MEDICAL STUDENTS. BY HORACE DOBELL, MEMBER OF THE ROYAL COLLEGE OF SURGEONS.

No. I.

ALTHOUGH we have not now the pleasure of being associated in a Medical College, yet I hope that, as long as we are endeavouring to mature the knowledge of our profession, the first germs of which were acquired during our hospital studies, we may consider one another in the light of fellow students. It is in this light that I address to you the results of considerable thought, devoted to a subject which appears to me of the utmost importance.

The first object of every student is to become thoroughly acquainted with the diagnosis and treatment of diseases, as they are at present known; but with this, surely, we shall few of us be content: if we stop here, we leave our science still in its imperfection. I believe it must be our ardent desire, as it is our honourable ambition, to extend the knowledge of disease in paths which are yet unknown—to extend the influence of treatment over maladies now deemed incurable; thus to add honour to our already noble profession by answering more fully its benevolent object.

We must be well aware that the task we set ourselves is not easily to be mastered—that many have laboured hard in the same field, yet have found but little of the treasure which they sought—that many have commenced the search and left it in despair—that the labours of some have been worse than useless, for they have done injury to the cause. We shall not, then, run heedlessly to the work, neither expect that a little labour will accomplish it, nor hope always to see the way clearly before us.

I have presumed that we have all this wish and intention, as far as in us lies—to raise our profession, and to elevate the science of medicine; but certainly this design will have a very slight prospect of progressing further—very little hope of ever coming into execution, however strongly it may be held, if we start on our career with nothing but the project in our heads, and have not decided by what means it is to be carried out, and in what manner these means are to be applied.

Before we can improve any thing, several provisions must be made—viz., 1st, we

must know the condition in which the thing to be improved already exists; 2d, we must form some standard of perfection as appertaining to it; 3d, we must discover what parts are necessary to raise it from its present to its perfect condition; 4, we must know the order in which the deficient parts may be safely supplied. Having ascertained these points, we are in a condition to work an improvement, and may proceed with a degree of confidence without which it will be difficult to find the energy for patience in the task. It is evident that our first business in the present case is to make ourselves duly acquainted with the state of medical and surgical knowledge in our own day—that is, to ascertain the present condition of the thing to be improved; and it is important that we should lose no time in doing this, so that every future step we take may be in the right direction. When the matter of this first proposition has been duly considered, and something like an unanimous opinion concerning it arrived at, we shall not be long in laying down a standard which we may call perfection in our science; and then commences the important and interesting business of determining the materials necessary to raise it to that standard.

The history and progress of every science may be readily divided into periods, and in each case the character of these will be chiefly distinguished by the character of the *Literature*, by which I mean the recorded observations and reasonings peculiar to that particular space of time. These records, which we term “the literature of the period,” must have been made by some individuals then living, and following the particular science to which they relate. It is evident, therefore, that men have a power to form the character of the literary age in which they live. This may be confirmed by a reference to history, in which we find the names of certain men invariably mentioned in connection with certain periods, to designate the phases of their literary progress: of this we have striking examples in sacred history, but we have also enough in the history of science.

Thus we find the “Pythagorean age” distinguished by Pythagoras and his disciples; the dogmatism connected with the names of Hippocrates, Aristotle, and Plato; the scepticism of Pericles and Pyrrho, which in medical science became the empiricism of Philinus, Serapion, and Heraclitus; the methodism associated with the names of Asclepiades, Themison, Cœlius Aurelianus, and of Lucieppus and Democritus. Then we have the period characterised by the writings of Galen—a period in the history of medical science taking its

character, and that one of such importance, from the exertions of one man. In later years we have the “spiritual philosophy” connected with the names of Descartes, Leibnitz, and Kant; the “sensual philosophy” of Bacon, Locke, and Condillae. Numerous other instances might be mentioned where the character of a literary age is due to the exertions and writings of a few individuals; but it is needless to enumerate them, as we have seen enough to establish the fact; and this fact is to us of most serious import and of the deepest interest, in so far as we learn from it that, if we labour for our science, we must be careful with what end the labour is performed; for, unconsciously to ourselves, we may give a wrong direction to the literature of medicine, and thus retard its progress; or, on the other hand, we may, by labouring with care and circumspection, and by combined efforts, give a valuable character to the literature of the period in which we live, and assist in bearing on towards perfection.

I have endeavoured to show that, in order to raise and perfect the science of medicine, we must first determine its exact present condition. We have seen that the present condition of the science being determined, something more is still necessary before an improvement can be made. A knowledge must be gained of the deficient parts, the parts necessary to make it perfect. And further, I have asserted that these parts can only be safely supplied in a certain order; that, in consequence of this, it is necessary to determine what stands first in this order,—which is the first part to be supplied, the first step towards perfection. Having done this, we are prepared to take the step, and when the step is taken we have worked an improvement. And lastly, we have seen that the steps of past ages in science have been taken by a few individuals who have agreed to walk together; that, whether the step were to improvement or degeneration, by some few men *combining in their efforts* the step has been made, and the record of it, handed down to us now, gives the character to a period in the history of science. These steps have for the most part been made by men of rare talents, and often of high genius; and to this, doubtless, they owed much of their power, added to the circumstances of unity of object and of system in their actions which characterised the day in which they lived.

But perseverance in study, clearness and calmness in thought, energy of mind, careful, unprejudiced reasoning, with patience in investigation, stimulated by an honourable ambition, may, I believe, supersede genius: therefore, should we lack bright

and rare talents, we need not despair; for, by the combination of many lesser talents, we may become more powerful than a few men of genius: and if we unite in determining the necessities of our profession, and in the formation of a design by which those necessities may be answered; if we determine what is the first step to be taken in the improvement of our profession, and what are the means by which it is to be taken; if we unite in the determination to exert these means, one and all of us, towards the same object, we shall certainly accumulate a vast power within ourselves, for our number is not small. We shall then, when scattered abroad in the world, form parts of one great machine, acting over a wide space, yet with one accord towards one object.

In the next place I must enumerate some facts and circumstances which appear to indicate, or assist in discovering, the present condition of medical and surgical knowledge. The idea we entertain of the present condition of anything which has existed for a number of years is to a certain extent independent, and refers only to its exact state at the time of examination; but to a much greater extent it is relative, and considers the state at the present time in comparison with conditions which have existed in past years, and with those which may yet arrive. It is to the present condition of medical science in this latter sense—*i. e.* in comparison with what it has been, and yet may be—that I shall now direct attention. For this purpose it is necessary to review the periodic history of our profession during the greater part of its existence, which must, unfortunately, be briefly done in these papers. Several arrangements have been adopted by different authors in describing the rise and progress of medicine; but the one which appears to me most clear, practical, and complete, and especially the most useful for our present purpose, is that of M. Renouard, in his late work "*Histoire de la Médecine*;"* and I believe that the best thing I can do will be to give a concise abstract of that part of his book which considers it. In the first place he divides the history of medicine into three "ages," and each of these ages he again divides into a certain number of "periods," making in all eight. The first age is called the "age of foundation," and includes four periods. The first of these, which M. Renouard calls the "primitive" or "instructive," commences at an indefinite time, and terminates at the fall

of Troy, about 1200 years before the Christian era. "This period," he says, "which corresponds to the first infancy of human societies, is surrounded by profound obscurity, and mingled with a multitude of fables. It embraces an indefinite period of time during which medicine could not be said to constitute a science, but consisted of an undigested collection of experimental notions vaguely described, and often disfigured by a series of incomplete traditions. We can understand that such a state of things would persist for a longer or shorter time in the different countries of the earth, in proportion to the more or less rapid progress made by the inhabitants of these countries in the career of civilisation. With Greece, who has transmitted to us the most beautiful and precious monuments of ancient medicine, the primitive period finished with the destruction of Troy."

The second of these, which is called the "mystic or sacred period," extends from the fall of Troy to the dispersion of the Pythagorean society, about the year 500 B.C. "During the space of about 700 years, which this historical period embraces, medicine underwent in Greece its first transformation; from domestic and popular, as it had been, it became sacerdotal and enveloped in a cloak of mysticism. Until then we had seen princes, officers, and even shepherds, gain reputation by their ability in this art; but after the Trojan war we hear only of consultations given in the temples under the name of the divinity, or at some celebrated altars—such as those of Charonion and Trophonius." "It is probable," says M. Gauthier, "that the reading of the inscriptions made by the sick in the temples, and the habit of seeing a great number of diseased people, would in the end give a certain medical education to the priests."

"We come next," says M. Renouard, "to an epoch in which the art of healing suffers a new metamorphosis, alike interesting to the historian and to the philosopher, and not less beneficial to humanity." . . . "The scientific monument of this difficult art is about to arise in grandeur and majesty, harmonising little by little in all its parts." This period, which is the third, finishes at the foundation of the Alexandrian Library, in the year 320 B.C. "We have now arrived at an epoch when science cast off the veil of mystery and revealed its secrets to the open day. The priests, who had been so long in the possession of the learning of the people, allowed the scientific sceptre to be wrested from them by the philosophers, and reserved only for themselves exclusive despotism over the sacred rites." "It is worthy of remark, and has not escaped the atten-

* *Histoire de la Médecine, depuis son Origine jusqu'au 19ème Siècle, par le Docteur P. V. Renouard: à Paris, 1846.*

tion of ancient observers, that the inhabitants of Asia, after having founded the first elements of the arts and sciences, and having brought them to a certain degree of development, at this period were themselves arrested in the way to perfection, or even retrograded; while the inhabitants of Europe, who entered much later on the career of civilisation, quickly passed their ancestors, and were themselves raised to a height which the others had never been able to attain."

The fourth, which M. Renouard designates the "anatomical period," extends from the foundation of the Alexandrian Library, 320 B.C., to the death of Galen in the year 200 of the Christian Era. In concluding the description of this period, he observes, "We have seen medical studies, already flourishing in the isle of Cos under the successors of Hippocrates, receive a new impulse by the foundation of the school of Alexandria, and attain suddenly in this city to a degree of prosperity until then unheard of. We have marked some of the circumstances which were coincident with this happy revolution, such as the foundation of a great library and of a museum of natural history, open, if not to the public, at least to all the studious men who came to dwell in the capital of Europe." "Then the dissection of human bodies, which among any other people could only be practised clandestinely and with peril, was not only authorised but even encouraged by sovereigns superior to the prejudices of their age. By this conjunction of circumstances the school of Alexandria became the most famous in the world for the natural and medical sciences." During this period, "anatomy and physiology had made the most considerable progress; internal and external nosography, medical and surgical therapeutics, had also acquired a great degree of perfection. Under the head of theory, medicine had made remarkable progress: in the place of some general perceptions, and incomplete attempts at systematisation, which one meets with in the works of Hippocrates, the period under consideration presents us with complete systems, of which the parts, carefully co-ordinated, adapt themselves more or less successfully to the various forms of disease and to the details of practice."

We next come to the second great division, according to M. Renouard: having finished the "age of foundation," including the "primitive period," the "mystic," the "philosophical," and the "anatomical" periods, we enter the "second age," the age of "transition," commencing with the fifth period of medical science, called the "Greek," which begins at the death of

Galen in the year 200 A.D., and finishes with the destruction of the Alexandrian library, 640 A.D.

In the time of Galen people still dissected animals, and this Professor informs us that he made his anatomical demonstrations upon apes, of which, he says, "the conformation approaches very nearly to that of man." "Sometimes, indeed, the army physicians obtained permission to open the bodies of barbarians which they took from the field of battle; but by degrees the use of dissection was entirely lost, and people no longer studied the conformation of the human body, except from books. This abandonment of anatomy no doubt contributed much to the degeneration of the healing art in this period, but other causes acted not less powerfully; in the first place, the rapid extension of Christianity, which disorganised the pagan schools and engaged so much of the attention of men's minds; in the second place, the few who remained attached to the cultivation of the natural sciences, fascinated by a vicious method, sought only for the explanation of natural phenomena in the writings of the ancients, not daring to allow any changes in the received doctrines. Two men only, Alexander and Paulus Aeginetus, in the course of more than four hundred years, showed a little originality, the one by enriching internal pathology and therapeutics with some observations, the other by adding to surgery some notable improvements; but although this period was unfertile in scientific progress, it was not in social improvements."

The next period in the "age of transition," and the sixth in the history of medicine, is called by M. Renouard the "Arabic period:" it commences at the destruction of the Alexandrian Library, 640 A.D., and terminates at the end of the fourteenth century. "Three great events," says M. Renouard, "occurred during the Arabic period, and in some degree resumed the march of the human mind. 1st. The Arabic nation, until then obscure, and almost a stranger to the progress of civilization, passed rapidly from a half savage state to the first rank of polite nations. . . . 2nd. The Greek nation, which for so many ages had marched at the head of civilised nations, let the laurels drop one by one from its ancient crown. It sank, by a slow but continual descent, to the last rank of modern people. 3rd. The western part of the Roman empire, subjugated by barbarians from the forests of Germany and Scandinavia, fell into utter darkness during the first years of this period. . . . "During the 12th and 13th centuries, the governments of Europe regulated themselves, and acquired stabi-

lity; liberal institutions were erected—the spirit of the northern people disengaged itself little by little from the rust of ignorance, and by the end of the Arabic period we deserv already some brilliant streaks in the horizon of European nations; and medicine participated in this progressive movement. . . . “Here finishes the ‘age of transition,’ or the ‘middle’ age.”

We now enter upon the third age, “the age of renovation,” according to M. Renouard, extending from the commencement of the 15th century to the present day, and the first period in this age, the 7th in the history of our science, is the “erudite,” comprehending the 15th and 16th centuries. “This age, which embraces a space of little more than four hundred years,—that is to say, about a third of the duration of the preceding age,—affords, nevertheless, to the history of the sciences in general, and to that of medicine in particular, materials the most numerous, the most varied, and the most interesting. The spirit of the western people, so long plunged in a kind of torpor, roused itself little by little, and seemed to have gained by the repose an extraordinary vigour: soon breaking its gothic bonds it advanced in every direction with youthful ardour. Some mounted the scale of centuries—to search over the remains of ancient sciences, to restore them, to devote to them a sort of cultivation—others exerted themselves to associate ancient with modern ideas, and to raise upon this double basement the monument of human knowledge; others, at length, more hardy, or more timorous, did away with the past—rejected tradition, and pretended to construct a scientific edifice solely from materials of new formation.” After considering this period at length, M. Renouard concludes by saying, “The historical period, the picture of which we have just considered, offers to us one of the most interesting spectacles. We have seen the human mind, so long enslaved by a lethargic sleep, gradually arouse itself, and mark its first steps by discoveries of the highest importance; the love of letters spread in proportion as the means of instruction multiplied. Science, confined in the cloisters during the middle age, became secular as in the time of Hippocrates, of Plato, and of Aristotle; but with more numerous and powerful means of propagation: the first effect of the expansive movement of intellect was to call the attention of the learned world towards the primitive sources of the beautiful and the true: they exhumed from the dust of the convent libraries the remains of Greek literature, and substituted them little by

little for the Arabian, the degenerate child of the former. Soon the monuments of ancient science suffered no longer from the ever-jarring ambition of the human mind; submitted to a criticism more and more clear-sighted and severe, these monuments showed forth a good number of defects, which much enfeebled the respect which had existed for these precious relics. Then, adventurous and impatient spirits attempted to overthrow the entire edifice of human knowledge, and to rebuild it in a day; but their work, the fruit of an imagination exalted even to disease, supporting itself neither upon reason nor upon experience, crumbled down before the light of discussion. . . Some men, however, knew how to combine the culture of ancient traditions with the love of novelty,—they understood that to reform would be better than to destroy, and that no change is justifiable but that which establishes a progress, or an amelioration; consequently they contented themselves with proposing partial modifications of the ancient doctrines with the object of perfecting, not of annihilating them.”

“Lastly, the eighth period embraces the 17th and 18th centuries, and is called the ‘reformatory period.’ In this we see the systems of Aristotle and Galen resist the premature attacks of the partisans of the occult sciences, and regain the great majority of minds by means of some partial modifications. The long duration of these systems, the almost unanimous accord of great men of antiquity in their favour, formed a more respectable precedent than people had yet generally learned to disregard. It is not astonishing, then, that men the most eminent in science preferred them to the confused and ill-elaborated theories of those who cherished occult doctrines. . . . “Nevertheless the domains of the natural sciences extended from day to day; observation had enriched them during two centuries with a multitude of new facts, which ill accorded, or did not accord at all, with the accredited doctrines. The moment approached when the necessity for a radical reform was about to be felt in nearly all the branches of human knowledge. Some men, whose knowledge equalled their genius, were about to appear to take the direction of the intellectual movement, and to substitute for the decrepid theories of the schools theories more new, more powerful, and harmonising better with the collection of phenomena: to the culture of the ancients there was about to succeed an immoderate desire to cast off their yoke, to get free in some way from their too long tyranny.” “This, says M. Renouard, “is why I have given to this period the name ‘reformatory,’ which,

if I do not mistake, perfectly characterises the general tendency of the mind—the dominant thought—the pre-eminent fact, of the epoch.” “In a professional point of view,” says our author, at the conclusion of his work, “the history of medicine has presented us with four distinct phases; 1st, a patriarchal phase, which corresponds to the origin of societies; an epoch when the head of a family united in his hands all power, and was the depository of all tradition; 2d, a sacerdotal phase, which reigned a long time in Egypt, which flourished in Greece, from the time of the Trojan war to the time of Hippocrates, and which reappeared in Christian Europe during the middle age; 3d, a free lay phase, the worst of all, as respects the dignity and morality of the profession; 4th, a legal or organised lay phase, the most perfect of all the professional forms known down to the present day, the best appropriated to the actual state of Europe, the most favourable to the progress of science and art.”

[To be continued.]

INSURANCE OFFICES AND MEDICAL REFEREES.

SIR,—I shall be much obliged by your inserting the following letter, which I lately received from an Assurance Office. Many Companies justly recognise the claims of medical men affording them confidential information; many candidly and straightforwardly refuse to give fees, yet require the information; but it is a new thing for a Public Company to condescend to the paltry and shuffling expedient I now desire to expose.

The London Indisputable Life Policy Company,
72, Lombard Street.

Proposal of the Life of S—— C——.
of——

Sir,—In answer to one of the usual questions, the Proposer has made reference to you in this case; and as in by far the greater number of Applications made to this Society for Assurance, the Medical Gentlemen referred to have not been consulted by the parties for any serious ailment, and have really no professional information of importance to communicate, I shall feel obliged, should the present be such a case, by your stating so in answer to the 1st Question.

If, however, you have attended the party for any serious disease, or have professionally, or otherwise, become acquainted with any circumstance affecting his health, which you consider important to be known to the Medical Adviser of the Company, when considering whether the life is eligible for Assurance, you will be pleased to

answer the 2nd Question, which will authorise my requesting your *professional* assistance.—I am, Sir,

Your obedient, faithful Servant,

ALEXANDER ROBERTSON,

Manager.

QUESTION I.—Have you any reason for supposing that an Assurance on this Life would be more than usually hazardous?

QUESTION II.—In the course of your professional attendance on the proposed Life, have you become acquainted with any circumstance likely to damage it?

Dated at this day of 185

M.D. or Surgeon.

To this letter I replied as follows:—

Romford, August 2, 1851.

Sir,—Your circular is so ingeniously worded that I believe it impossible to answer either Question 1 or 2, without giving you all the information you desire, and thus precluding the necessity for your requesting my “*professional*” assistance.

I have attended Mr. S—— C—— for an important complaint, which confined him to his bed for some time, and I shall be most happy to furnish you with the particulars of his illness, and also with my opinion as to his strength of constitution and eligibility for assurance, provided such information be considered as “*professional assistance*.”—I am, Sir,

Yours obediently,

NORRIS F. DAVEY.

A. Robertson, Esq.

The only result of this reply was a refusal on the part of the office to grant a policy, unless I supplied them with particulars of the illness alluded to; but, although thus admitting the importance of my information, they refused a fee.

Unfortunately I was about to leave home for a few days, and my patient, anxious to complete the assurance, begged me to leave the required information in his hands, to be used if absolutely required.

My letter was produced, the policy granted, and my “obedient and faithful servant,” the Manager, of course, saved the company a guinea.

Now the complaint for which I attended the Assured was a sharp attack of Rheumatic Fever, doubtless a “serious ailment,” and I was able to assure the company, (from daily auscultation) that my patient had entirely escaped those cardiac complications, which, had they occurred in any degree, might have affected seriously the interests of the Assurers.

It is clear, then, that the Company, while admitting the value of information given by private medical men, never intend to pay for it, but have recourse to the un-

worthy subterfuge of an implied promise to do so: their policies are said to be "Indisputable," their meanness certainly is so.—I am, Sir,

Your obedient servant,

NORRIS F. DAVEY.

Romford, September 16, 1851.

THE GRINDING SYSTEM AND EXAMINATIONS AT THE HALL.

SIR,—I so heartily coincide with many of the observations made respecting the system of grinding, in your last number, that I cannot forbear giving additional evidence of the rottenness of the system of examination pursued by "the Hall." When in London I worked assiduously, and stood far more frequently first than second in the school in which I studied. Before I went up to the Hall I was recommended "to grind." I declined, feeling quite strong enough in the position I had gained to try a fall with any examiner. I went up, and was asked a variety of questions which had about as much bearing upon navigation and astronomy as upon medicine. Two of them were—Why is there so much ice at the poles? and why does a body weigh heavier there than it would at the equator? I gave a single reply to each of these: to the first, the absence of the direct heat of the sun—to the second, the flattening of the poles, and their consequent nearer proximity to the earth's centre. These were not the answers required, and I was but partially enlightened on the subject by the examiner: I passed without any difficulty. Next day I met one of our students, who, having spent two sessions in anything but study, was then diligently grinding, hoping to pass in a week or two. I give you, as nearly as possible, our conversation.

"Well, —, so you've passed?" "Yes, easily." "Who examined you?" "I don't know his name." "What was he like?" I gave the description, but the man could not be identified by that. "What did he ask you first?" "Oh! how to take specific gravities—then about common gravity." "Ah! that's Mr. So-and-so. Well, what next?" "Then he asked about light and the spectrum." "Yes, and then you said so-and-so. Now, I'll tell you how he went on." The questions I had been asked were then gone over *seriatim*, and the answers required were given as pat as if he had been the examiner and I the candidate. My friend seemed equally *au fait* at the favourite questions of the rest of the examiners; and, when he went up, he had not the slightest difficulty in passing.

I only once went to see the plan of grinding, and heard many such expressions as this:—"Gentlemen, if Mr. — ask you your opinion about so-and-so, you tell him such a thing; but if Mr. Somebody else ask you, you must give him such an answer: what will do for one will not do for another."

On one occasion, a friend, whose knowledge and judgment are superior to my own, joined with me in cramming a fellow-student for the Hall prior to his going up. We found him lamentably deficient, and strongly urged delay. He went up in spite of us, and gained what neither of us had done—"the compliments of the Court."

About the same time another man, his superior in every respect except botany, was rejected.

You will see how closely these observations agree with "Observator's." The only thing in which I differ from him is in the remedy he proposes. He thinks the examiners are too few, and hold office too long. I think they are *too irresponsible*. They dare not ask many of the questions they do before the *élite* of the profession: they would feel ashamed of such littlenesses before their equals as they readily commit before students. Let the examiners, therefore, be required to prepare their questions in writing before they ask them, and let a true copy of all these questions, authenticated by the examiner's signature, be sent monthly to the different periodicals. They might then be laid before the profession generally; and, if there was anything deserving comment, it could be remarked upon by persons more impartial than the examiner or the examined.

If it be asked how the publicity of the questions would improve their general character, I answer that, when a man *writes* a question, he makes it as general and comprehensive as possible: when he puts it *viva voce*, he thinks less about it in every way. If he knows that his questions may be published (like those of the London University), he dare not put frivolous and vexatious ones. He is aware that all students may read them: he will therefore take care to make them comprise as large a field as possible, and vary them in such a manner that no one can hope to depend on grinding for answers.

If largeness of scope were aimed at instead of petty littlenesses, the number of real *students* would augment, the grinders would cease to exist, and the examination at the Hall would become far more respected than it is.

I am, sir,

Your obedient servant,
T. J.

THE GRINDING SYSTEM AND MEDICAL EXAMINATIONS.

SIR,—I have just perused your observations, together with those of your correspondent, in the last number, with reference to the prejudicial consequences of the above system, by which the profession is overstocked by a host of improperly-qualified members, to the great detriment of those more deserving, as well as of the community. "Observer" justly remarks that "We medical men ehide the public for patronising quackeries, from homœopathy downwards; and in this we act properly; but it would be well for us, at the same time, one and all to combine for the purpose of setting a proper guard over the portals which admit strangers into the temple of medicine."

That the inefficient state of our medical organisation, as compared with that of other countries, is the chief cause of the greater prevalence of quackery in England, and of the public confidence being averted from the profession into irregular channels, is a truth of which I have long felt convinced; and until this inefficiency is remedied, it will be vain to seek to repress, by penal or other means, these evils, of which the profession has so much just reason to complain. And I humbly opine that the best guard against indiscriminate admission within the pale of the profession would be found to be practical as well as simple *viva voce* examinations; and, above all, that the temptation be not held out to examiners (as has been hitherto the case) to facilitate the acquisition of the diploma, but that a fixed salary be allotted to them, whether few or many candidates pass.

We have seen, by the evidence of Mr. Guthrie, that from the time he joined the Council of the College of Surgeons (and doubtless long before) the examination fees were a most important consideration for several examiners; and there is too much reason to believe that such must always be the case under the existing system.

This is an evil (peculiar to Great Britain) which I also stated to the Parliamentary Committee as in my opinion having greatly conduced to the progressive deterioration of the profession in public estimation.—I am, sir,

Your obedient servant,

EDWIN LEE.

October 1, 1851.

EFFICACY OF GALIUM APARINE IN LEPROSY.

SIR,—A gentleman, an acquaintance of mine, who had suffered for many years from lepra vulgaris, for which he had taken all the usual remedies without obtaining the slightest relief, informed me not long

since that he had at length found a remedy for his disease. He told me it was a wild plant, of which he did not know the name, but that he would show me the spot where it grew. On examining the plant, I discovered it to be the galium aparine, which grows so abundantly on the hedges in this country, and is commonly known by the name of cleavers or goose-grass. At the time I saw him he was taking a strong decoction of the plant, and under its use the rash was disappearing rapidly.

On making inquiries, I find that three other parties have been cured of similar diseases by the same remedy. One of the parties had been discharged from St. George's and also from the Middlesex Hospitals about twenty years since, as a incurable patient. The remedy was introduced here about twenty years since by some German itinerant quack.

I have as yet not had much experience in the use of this remedy. It appears to act as a mild diuretic, and may be given in large quantities, as it does not produce any injurious effect on the system. I use a decoction made by boiling a large handful of the plant in a quart of water for about twenty minutes. Of this decoction I give three parts daily.

I shall feel obliged by your giving this note early publicity, and am, sir, your obedient servant,

J. M. WINN, M.D.,

Physician to the Cornwall

Truro, Sept. 28, 1851.

Infirmery, &c.

Medical Intelligence.

CREWKERNE AND YEOVIL MEDICAL ASSOCIATION.

THE recently established but already flourishing Association, formed by medical gentlemen residing in the districts of Yeovil and Crewkerne, held its second general meeting on the 11th instant.

This Society has been actively engaged in promoting the dignity of the profession and condemning irregular practice. The members do not hold any intercourse with those who are not legitimate practitioners, and appeal to the Royal Colleges and the Company of Apothecaries to evict those who fraudulently have become, and continue to be, possessors of their diplomas; and it seems nothing more than just that the power should be given them so to do, if they do not already possess it. Surely, if we are to have no quack bishops, we ought to have no quack professors.

This meeting discussed another subject of much importance, and it is to be regretted that the evil exists as much as we

hear it does. Tradesmen and respectable farmers are in the habit of becoming members of benefit societies and clubs for the purpose of receiving medical attendance for a yearly payment of from three to six shillings each. This injurious practice now occupies the attention of the Society, and we hope soon to see it abolished.

The communication of very interesting cases, and the interchange of professional opinions, must be of benefit to the members, and we trust that ere long the neighbouring practitioners may enter the Association to create a powerful and efficient representation of the profession in West Somerset, and thereby assist the good cause of medical reform throughout the kingdom. Heartily do we wish it every success.

ROYAL ORTHOPÆDIC HOSPITAL FOR THE CURE OF CLUB FOOT, &C.

ON Friday a meeting of the committee of the above institution was held in the board-room of the hospital, Bloomsbury Square. From the report it appeared that the hospital had now extended its benefits to nearly 12,000 individuals resident in all parts of the United Kingdom. From 20 to 50 new cases are received weekly, and there are now fully 700 in regular attendance for the cure of their deformities. Upwards of 300, the severity of whose cases demand indoor treatment, are on the books waiting for admission; the wards of the hospital, however, are fully occupied, and as the delay of surgical assistance renders most cases more difficult, if not dangerous, strong hopes are entertained that the committee will be enabled to extend the accommodation of the hospital. Already considerable progress has been made in raising the necessary funds, and a more extended co-operation is only needed to complete so philanthropic and desirable an object.

THE LATE DR. BADELEY.

AN inquest was held on the body of the late Dr. Badeley, of Chelmsford, whose death we recently reported in this journal, and, after a very full inquiry into all the circumstances, the jury returned the following verdict:—"That deceased died of apoplexy caused by an overdose of opium taken inadvertently to allay a pain under which he was then suffering." Dr. Badeley was in the 57th year of his age.

ROYAL COLLEGE OF PHYSICIANS.

AT the quarterly meeting of the Comitia Majora, held on Tuesday, September 30th, the following gentlemen, having undergone the necessary examinations for the diploma, were admitted members of the College:—Dr. Habershon, Finsbury Circus—Dr. Barron, St. Thomas Street, Southwark—Dr. Parker, London Hospital. Also, Dr.

Thornton, Norwich, was admitted an Extra-Licentiate.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 25th September, 1851:—Henry Walter Bucknill, Rugby, Warwick—William Hill Clarkson, Ledbury, Hereford—George Jonathan Hitchinson, Carrington, Boston—James Black, Chesterfield, Derby.

OBITUARY.

ON the night of the 21st of July last, perished in the wreck of the Pacha, on his passage from Hong Kong to Calcutta, William Briscoe, Esq., M.D., Assistant-Surgeon, Her Majesty's 61st Regiment, aged 27, youngest son of the late John Briscoe, Esq., of Bathford, near Bath.

On the morning of the 26th ult., Western-road, Brighton, Robert Deverell Pyper, Esq., M.D., aged 34, after long and protracted suffering.

On the 26th ult., suddenly, at Santa Maura, E. R. Richardson, Esq., Assistant-Surgeon to the 47th Regiment.

On the 27th ult., at the residence of his friend, W. F. Hopkins, Esq., Surbiton Hill, Surrey, after a few hours' illness, Charles Julius Roberts, Esq., M.D., of New Bridge Street.

ACEPHALOUS FEMALE FŒTUS. PRESENTED BY DR. W. E. TOWNSEND.

THE chief peculiarity connected with this case was the difficulty of determining the pregnancy of the mother. She has had three children before this, and reported that she had no one symptom of pregnancy that she had before experienced, except the non-appearance of the catamenia after the death of her last infant, and, as she had been before irregular, she did not attach much importance to that symptom.

During the whole period of gestation, she felt, at times, severe pain in her sides and back, had much suffering accompanying her discharges, and during the last three months, obtained but little respite from pain day or night. No placental murmur could be heard, nor could the pulsations of the foetal heart be detected, and it was only after a careful vaginal examination that her condition could, with certainty, be discovered. She had no enlargement of the waist, the whole of the increase of size being below that part, and this varied greatly from day to day. At delivery, about two gallons of liquor amnii escaped; the foetus presented by the feet, and was still-born. The spine is bifid as far as the lumbar vertebræ, and the whole bears a very striking resemblance to a large bull-frog.—*American Journ. of Medical Science.*

BOOKS & PERIODICALS RECEIVED

DURING THE LAST FOUR WEEKS.

Wiesbaden. Its Hot Springs: their Efficacy and Application. By Francis Gergens, M.D. Translated from the German. Wiesbaden.

Verhandlungen der physikalisch-medizinischen Gesellschaft in Würzburg. Redigirt von A. Kölliker, J. Scherer und R. Virchow. 1 B., Nos. 14—22. 2 B., No. 1—5. Erlangen.

Report of the Speeches on Irregular Practice, at the 19th Anniversary of the Provincial Association.

Edinburgh Monthly Journal of Medical Science. September and October 1851.

Lectures on Clinical Medicine. By J. H. Bennett, M.D. &c.

Nueva Guia del Bañista en España. Von D.A.M. de San Juan. Madrid, Bailliére, 1852 (!)

Henke's Zeitschrift für die Staatsarzneikunde. 3te V. H. 1851.

Casper's Wochenschrift für die gesammte Heilkunde. Nos. 30—33, 26th July to 16th August, 1851.

Comptes Rendus. Nos. 6—10, 11me Août à 8me Septembre 1851.

A History of Epidemic Pestilences, from the Earliest Ages, &c. By Edward Bascome, M.D.

The Prevention and Cure of many Chronic Diseases by Movements. By M. Roth, M.D.

Nederlandsch Weekblad voor Geneeskundigen. Nos. 6, 9, and 12. 1851.

General Hospital, Birmingham. The Crisis. By T. Gutteridge, M.R.C.S.

Journal de Chimie Médicale. No. 9, Septembre 1851.

Pharmaceutical Journal. October 1851.

The Pathological Anatomy of Bronchitis. By W. T. Gairdner, M.D.

A Dictionary of Practical Medicine. By J. Copland, M.D. &c. Part 15.

London Journal of Medicine. October 1851.

British and Foreign Medico-Chirurgical Review. October 1851.

The Journal of Psychological Medicine. October 1851.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 29.77

„ „ „ Thermometer^a 54.8

Self-registering do.^b Max. 0.0 Min. 35.2

^a From 12 observations daily. ^b Sun.

RAIN, in inches, .15. — Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 3° below the mean of the month.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Sept. 27.

| BIRTHS. | | DEATHS. | |
|-----------|------|-----------|-----|
| Males.... | 732 | Males.... | 473 |
| Females.. | 754 | Females.. | 485 |
| | 1486 | | 958 |

CAUSES OF DEATH.

| | |
|--|-----|
| ALL CAUSES | 958 |
| SPECIFIED CAUSES | 956 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 267 |
| Sporadic Diseases, viz.— | |
| 1. Dropsy, Cancer, &c. | 43 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 110 |
| 4. Heart and Bloodvessels. | 31 |
| 5. Lungs and organs of Respiration | 77 |
| 6. Stomach, Liver, &c. | 60 |
| 7. Diseases of the Kidneys, &c. | 5 |
| 8. Childbirth, Diseases of Uterus, &c. | 9 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 9 |
| 10. Skin. | 2 |
| 11. Premature Birth | 0 |
| 12. Old Age | 45 |
| 13. Sudden Deaths | 8 |
| 14. Violence, Privation, Cold, &c.... | 58 |

The following is a selection of the numbers of Deaths from the most important special causes:

| | | | |
|--------------------|----|-------------------|-----|
| Small-pox. | 13 | Convulsions. | 35 |
| Measles. | 17 | Bronchitis | 40 |
| Scarlatina | 41 | Pneumonia | 25 |
| Hooping-cough | 23 | Phthisis | 123 |
| Diarrhœa. | 91 | Lungs | 3 |
| Cholera. | 9 | Teething | |
| Typhus. | 46 | Stomach | 2 |
| Dropsy | 9 | Liver | 8 |
| Hydrocephalus | 24 | Childbirth | 7 |
| Apoplexy | 26 | Uterus | 1 |
| Paralysis | 20 | | |

REMARKS.—The total number of deaths was 76 below the average mortality of the 39th week of ten previous years.

NOTICES TO CORRESPONDENTS.

Mr. Craig's concluding paper will be published in the following number. The note has been referred to the printers.

Mr. James Reid's paper has been received.

Mr. James Rigby.—Inquiry shall be made.—Letters respecting the transmission of the Journal should be addressed to the Publishers, and not to the Editor.

Mr. W. Parker.—We have received the correspondence with the Epidemiological Society, but we do not understand for what purpose it has been sent.

Dr. Patterson's request has been attended to. Inquiry shall be made respecting the lists, which, in general, are published regularly.

We regret that we could not find room for the Guernsey address in our last number.

Dr. J. P. Gildermeester, Amsterdam.—We are obliged by the letter, but in answer beg to say that we cannot at present add to the number of our exchanges.

We have to acknowledge the receipt of a letter from Mr. Gutteridge, as well as a copy of his pamphlet.

The papers and correspondence respecting the Lincoln Lunatic Asylum have come to hand.

Mr. Davey's letter is inserted in the present number: it was unavoidably postponed from last week.

ADVERTISEMENTS intended for insertion in the GAZETTE should be addressed to the publishers, Messrs. LONGMAN AND CO., 39, Paternoster Row, London.

Lectures.

*INTRODUCTORY LECTURE

DELIVERED AT

ST. BARTHOLOMEW'S HOSPITAL ON THE
OPENING OF THE MEDICAL SESSION.

BY F. C. SKEY, Esq., F.R.S.

THERE is no part of the duty that devolves on me as the Professor of Anatomy in the Medical College of St. Bartholomew's Hospital, which I would more willingly part withal, than that which introduces me this evening in the capacity of an introductory lecturer. It is, however, too late to question the utility or the policy of the undertaking. I have accepted the honourable appointment simply because I had no alternative; and in my appeal to each and every of my colleagues to relieve me of a task so little consonant with my inclination, universal rejection has met me from every quarter. You are consequently, and I may add unhappily, thrown on my resources: you have staked an hour of time, which I will, however, endeavour to rescue from total destruction: I am not certain that I shall succeed.

When I recollect to recollection the various subjects which I have known as forming the staple commodity of these interesting occasions, I have seen so much excellent advice, so much earnestness wasted, that I almost despair either to fix your present attention, or to succeed in sowing the seed, as it is termed, of future improvement.

The profession of medicine is certainly a noble pursuit—great in its conception, glorious in its objects. What occupation can be more noble than that which seeks to prolong God's gift of life, and to smooth its path by the mitigation of pain and suffering? Can man affect a higher aspiration? Yes; one, and one only. But next to that duty that prepares a soul for immortality is the duty that devolves on us of mitigating the sufferings of humanity, whether the result of accidental cause, or of those diseases begot by indulgence in the enjoyments of life. But these are abstract views. Analysis of motive will not bear them out. The power of ministering to a mind diseased infers an exalted position in the minister: it infers purity of mind; it infers the absence of those passions which weigh like a heavy load on the conscience of the sufferer. In these duties man is deemed an exalted being; there is something sacred in his functions. So, in medicine, to restore, by

skill, a man wasted by sickness and suffering to his social circle—a father to his children, is a great deed in life. In discussing the influence of our professional services, we habitually and properly refer to secondary causes only; and neither the cause of philosophy nor religion requires a further reference. It is sufficient that, in the possession of our free will, we exercise our intellect in the cause of humanity. By that intellect a good man is restored to society. This noble act was supposed to be derived from the gods; and in the abstract it is godlike in its influence. But, gentlemen, it were vain to represent these duties as invariably emanating from the highest motives, or embracing the highest intellect; for their application—a matter-of-fact, every-day kind of view of these matters—is not without its advantages.

What is Medicine? In casting a glance over the assembled multitude who have honoured us by their presence this evening, an ignorant man would suppose that in the distribution of the occupations of life that of medicine had fallen upon us not accidentally, but rather determined by the dictates of natural genius,—a yearning after the specific pursuits of that profession which we denominate medicine, or more barbarously, physic. Is it so? A man is said to have a genius for physic. In the history of a celebrated physician, it is said that he gave the earliest indication of talent for his art, having been discovered while a boy in the act of dissecting a dog. Of another equally celebrated man, that, while yet young, he dressed a neighbour's wound with remarkable skill.

Suppose I were to examine you, gentlemen,—or, better still, if I were to subject my learned friends around and about me to the same inquiry, and ask what dictated your decision in favour of the medical profession, to the exclusion of the rival pursuits of religion, of law, or of commerce? I might be answered by the unthinking,—a genius, or rather a natural talent for medicine. What is medicine? Take the two examples I have above selected. Does the desire to pick to pieces without end or object, beyond simple, untutored, and aimless curiosity, the mortal remains of a deceased dog, mark the brilliant career of the future physician? or the dexterity, the love of cleanliness,—perhaps the mere kindness of disposition that dictates the aid afforded in the second example,—stamp the successful career of the future surgeon? And yet, in speculating on the cause of their future success in life, these two facts would be greedily seized by the biographers of either man, and referred to as evidence of inborn genius for the art and science of medicine; and a presidential chair of a

Royal College is prognosticated as the only goal at which such talent must ultimately arrive. The sober truth, however, is, that there is no sufficiently distinctive character in the profession and pursuits of medicine to justify the call upon genius for its inspiring influence on his future career.

A man may develop a genius for anatomical pursuits, but that does not constitute medicine, but simply a desire for a knowledge of the mechanical structure on which the physician works. And I may venture to assert as a general rule, that such men as have exhibited a genius for this engrossing pursuit have displayed no remarkable aptitude for either the acquirement or the application of the other branches of knowledge, and all the other and numerous requirements of the successful practitioner. Besides, if we analyse the occupation of the anatomist, we shall again subdivide motive, the acting principle, the love of the knowledge of the structure, and the love of the art of the dissector—itself a fascinating pursuit with the naturally dexterous manipulator. The best dissectors are not necessarily the best anatomists. One of the best, the neatest dissectors, I have ever known, would make the most complete and elaborate display of any given part of the human body, yet was profoundly ignorant of the anatomy of the part displayed; while another man would acquire that knowledge by a rough unfinished exposition of the same region: these are motives.

A man may display what we term a genius for the dressing of a wound. To be sure, it is not a genius of a very exalted kind; but even in this trivial act the moving power—to use the language of the natural philosopher—may vary. But such success will hardly point to future pre-eminence in the walks of medicine, except in that very limited one on which he has already entered,—a success involving more, perhaps, of the moral than of the intellectual character of man; determined, as I have said, by a love of cleanliness or of neatness, or dictated, possibly, by the love of excelling rather than the love of excellence. This, you will readily allow, is not medicine.

A man may display from early life an aptitude for chemical pursuits. This talent may assume the direction of analysis, or may soar into the higher regions of philosophy; or he may acquire a profound knowledge of the nature and properties of drugs, or of chemicals, with the power of combining them chemically and elegantly, but he may be profoundly ignorant of disease, and of the power of controlling it. Much of our occupation—in surgery at least, but not exclusively in surgery—demands the assistance of manual dexterity. If you will

define manual dexterity to be a correct estimate or appreciation of the force required to effect an object, combined with a natural tact in the mode of effecting this object by the shortest means, I think you will have a correct idea of the nature of the term. Now, without doubt, manual dexterity is a great acquisition to a medical man; but inasmuch as this quality of a man is apposite to other and to all mechanical pursuits in life, it is no especial attribute of medicine—a valuable attribute when combined *with* medicine, but not *of it*. As I am imagining a man of high pretensions to success, I still retain the word “genius,” although it is for the most part an exceedingly inappropriate one, and might generally be more correctly supplied by the word “aptitude.” The claims to future success of the physician—a term I also use as indicating the genus, and, for the nonce, representing each class of medical practitioner—may be mainly referred to the possession of two distinct qualities of the mind; first, a genius for observation, and, second, a genius for detecting or for inventing, or for prescribing the means of cure. *Observation* is the greatest of all the requisites for legitimate medical preeminence. It is comprehensive in its meaning—not bounded by the simple interpretation of the word “observance;” but it includes a vigilant scrutiny, with a power of generalization and analysis of the characters of a disease. If there be one feature in the perfect medical character projecting in a salient form beyond the dull level of a common intellect, it is this:—A man has a genius for observation: experience cannot beget it; quickness of perception cannot imitate it; memory cannot supply it; and yet quickness of perception, experience, and memory, or association, are all requisite for its perfection. This is, indeed, an important, as it is a necessary quality in the mental character of the eminent physician. The power of seizing at a glance the prominent and striking features of a complicated case of disease; of combining and of analysing them; of referring them to their respective causes; of detecting the factitious, and distinguishing them from the real; of sifting the grain from the chaff; and, more than that, of tracing those that remain to a centre, and that centre the disease.

Take a case of hysteria, the most eccentric and protean of maladies: it is mistaken by the man without genius, detected at a glance by the man with; you may call this, experience. I say it treats on the confines of genius, such a man is naturally acute; acute in this particular form, and possibly in this form only. He possesses this power not by study, not by experience merely, but it is an original attribute of his mind, and

a part of his moral configuration. Nothing beyond industry and opportunity are required to perfect it, and when acquired it is a golden key to unlock the greatest of our difficulties; but taken alone as a single possession, observation does not necessarily beget success, if by success is meant, in general terms, the control of disease.

Now I proceed to the other requisition, viz., the faculty of curing disease when ascertained; or, as I have said, that of detecting or of inventing and finally prescribing the means of cure. This I believe to be frequently an emanation of genius. It is really often more instinctive than any other; it is the parallel to the power of imagination of the poet or the painter: neither study, nor observation, nor memory, nor ordinary acuteness of perception, can supply it, nor can reason itself altogether expound it.

In the treatment of rare disease it is on great occasions the highest of all acquirements, and one of the most striking characteristics of the medical mind; so far, I say, as regards the subject of treatment. But the full exercise of this faculty (for it may be possessed but not exercised), demands two other moral requisites—*enterprise* and *independence*. A man who pursues the path of routine practice, whose timidity presents a bar to his advance beyond the circle prescribed by custom and authority, such an one wants enterprise. A man conscious of strength must venture something more; he must dare to improve his art. Johnson defines enterprise as an undertaking of hazard, in which the mind does not detect connection or effect by direct reasoning; but where he, (to use the language of a greater man than the great bibliographer himself,) “floats in adventure,”—Locke. And this quality of mind, dangerous as it necessarily is in defined and regular subjects, is well suited to the purposes and requisitions of our profession; and, indeed, is indispensable to superiority: simply because medicine is in reality an art more or less empirical, claiming the co-operative aid of the imagination as well as of the reason. Deprived of these qualities, the practitioner of medicine becomes what the French school call a mere *routinier*, the obedient pursuivant of authority, a dependent satellite revolving in one untiring and unchanging axis around a centre—content to reflect the power of other orbs, and possessing no better claim to primitive light than the satellites of the material world.

An independent mind dares these things: a man may possess love of enterprise without the independence to exhibit it in his daily actions. The man of independence, directed by authority, acts on reason; he withholds a too willing assent to doctrines

that he cannot comprehend; he thinks and acts for himself. He has ascertained that the opinions of the majority are not necessarily the opinion of truth; and he leaves the unprofitable path of daily *routinism*, to discover a mode, a system, or an agent, more valuable than that employed by others. The degree of empiricism involved in the practice of medicine depends greatly on the character of the mind engaged in the practice. The term is derived from the Greek, “to attempt;” literally given, “a random shot.” An inexperienced sportsman who fires in the middle of a covey of birds, for example, with the intention of killing one or more, is an empiric; so the learned member of our profession who compounds a medley of discordant materials, and declares the universal efficacy of the total, is an empiric.

Yet it is important that we clearly distinguish the random prescription of the ignorant empiric from the instinctive effort of the cultivated medical mind, which, under the guidance of reason, selects a remedy which experience does not sanction, but instinct does.

The practice of medicine is an imperfect art, and hence the liability of the majority to follow out the principles, true or erroneous, of authority. Principles vary, and doctrines incompatible with each other, and consequently with truth, stamp a nation or even a school, and distinguish it from another. In all speculative subjects this evil must of necessity prevail. It is rare indeed that a man thinks for himself; the mind is enchained and coerced by habit, and the opinions of the mind, as well as the sentiments of the heart, become engrafted almost in our very nature by early habit and association. It signifies very little what subject we select for illustration—religion, politics, philosophy, medicine or chemistry, one and all obey this injurious law; viz., the subserviency of the mind to the dictates of authority. Is it not true that the doctrines of religion and of politics run in families? Is there one subject open to discussion so multifarious and so various, as religious opinions, so infinite in their shades of difference; embracing every variety of creed, and demanding every form of worship, from that of the grand and sublime doctrine of an infinite God, till it literally degenerates into the motley forms of absolute burlesque; and in which “man plays such fantastic tricks before high Heaven, as make the Angels weep.”

Now this fact does not prove that men will venture to think for themselves; it merely attests the fact that here and there one man will think, and carry others away by his authority. Some 25 years ago, this

theatre was attended, during one session, by a singular person who pursued the calling of minister of the Scotch Church; and possessing a considerable share of wild emphatic eloquence, he got together a large assemblage, embracing people of high and low degree, who deemed his pretensions verging on that of an Apostle direct from Heaven. The peculiarities of manner worked on the imagination of his hearers, and obtained for him, for the season, the highest popularity: men of rank and men of intellect flocked around him. The truth is, that the man's intellect bordered on insanity, and the adulation of the world betrayed but did not expose him. He fancied that he saw writing on the walls, and heard voices in foreign tongues from heaven;—and the people believed him. Indeed, so unbounded was the faith of his admirers, that they became in their turn filled with the same spirit, and they held forth in unknown tongues; and for a time this farce was continued, to the great scandal of true religion, and to the disgust of all rational men, until the truth became too obvious for further concealment, viz., that the reverend gentleman was mad: "'twas pity, but 'twas true." It pleased God, however, to put an end to his career by death; and he may fairly be said, like his great prototype, to have left his congregation "in the lurch;" for the unknown tongues for some time outlived his decease, till they also died a natural death. The moral of this true story is obvious: a want of independence of thought,—certainly not of the power of thinking—led hundreds of persons to uphold by their presence this disgraceful mockery—this unsurpassed delusion. Thus we find men prone to relinquish the reins of thought into others' keeping, who are led on to the adoption of opinions absurd and improbable. I advise you to adopt no man's opinion, nor his principles, until you have questioned them, and tested their value by your own reason, and not by that of another.

Do not imagine that because I advise you to encourage a spirit of independence that I recommend you to begin with scepticism, to raise a standard of general incredulity,—this would be a fatal error; you are students, not teachers, and as students it is fit and becoming that you place confidence in those appointed to instruct you. But, as you have seen, trust may proceed to an injurious length; and in credulous and dependent minds this evil is a highly probable one. If a person of good authority tells you a fact occupying a place in the direct channel of belief, you would unhesitatingly adopt it as your own; but if the same person were to state another fact so

remarkable as to startle your belief,—a fact contrary to the generally supposed laws of nature, you would hesitate to accord him your reliance on his statement: for example, if, in the course of a lecture, a well-known professor of high repute for veracity stated that he had seen a man jump from a house and fall uninjured, you would naturally deem the occurrence an unusual one, but your conviction of the fact would be the homage you would pay to the veracity of the teacher. But if the same man, however high his authority, assured you that he had seen a man jump over a house from one street into the adjoining one, would you believe it? I should have a bad opinion of your mental character if you did. Now supposing the teacher, as I have said, to be a man of high repute for veracity, neither could you discard the facts stated; there is a truth between scepticism and credulity, a sort of neutral ground on which the mind takes its stand, in cases involving such forms of complicated evidence, and in which it ruminates on the food it has swallowed for the purpose of either assimilating or of discarding it according to the evidence subsequently obtained.

The same bias in the formation of opinions prevails in all subjects of speculation; nor can it be reasonably expected that you should be exempt from this evil tendency, so long as the authorities in our profession refuse to exact from you, and from others who will follow you, the advantages of preliminary education. So far as these evils appertain to our profession (and to what calling or occupation are they more pertinent?) education is their only antidote.

Many years will not have passed over our heads before this important change will be effected; when the portals of the great College of Medicine will be closed to all but the educated, when no mind will be brought forward as the candidate for medical honours but that which has been sufficiently tutored. The mind must be ploughed, rolled, harrowed, watered, weeded, like the earth itself; and prepared to grow, and to mature to perfection the good seed sown within it. It is no fault of yours that many of you have entered on the studentship of our profession unprepared to contend against the evil tendencies of erroneous opinions; and with respect to medicine in general, if we gauge the opinions floating throughout the world, there are probably more wrong than right,—if opinions they may be termed at all,—but you will both adopt them and live to see their fallacy.

I have now given you a very brief sketch of the intellectual requisitions of the pro-

fession of medicine, so far as relates to the power of acquiring the requisite knowledge.

I have endeavoured to impress on you that the profession of medicine possesses no unique, single, or distinctive character—that its requirements comprehend many qualities, and many excellencies—that a man's mind may indicate force in one direction, while it may betray weakness in another; it may exhibit a power of observation without the power of applying it. It may even display an aptitude for determining remedies without possessing a very definite insight into the nature of the disease treated; the student may by the exercise of one faculty, and that a very valuable one—*memory*, have acquired abundance of knowledge; he may have become a good anatomist, a good physiologist, or a good chemist, and he may fail in the power of application of the knowledge so acquired; for I have observed through life that the faculties of memory and of judgment, or the power of applying acquired knowledge to the business of life, are often held in an inverse relation to each other; and in no class of persons is this fact more palpable than in such as display genius for some especial department of mental enquiry; of which fact the following is a remarkable example:—In the year 1822, Mr. Roscoe, the elegant biographer of Lorenzo de Medici, published a memoir of Richard Robert Jones, a poor Welsh fisher-lad, who in a low rank of life, and in circumstances of the utmost indigence, and with a weak intellect on other points, had acquired an almost perfect knowledge of languages. He is described as “ragged as a colt,” and yet, in his little boat on the coast of Wales, he had acquired the Greek, the Hebrew, and the Latin languages; read the *Iliad*, *Hesiod*, *Theocritus*, &c.; studied the refinements of Greek pronunciation; and examined its connection with the Hebrew, and could translate Latin with the utmost facility into either English or Welsh. One day, Richard had an interview with Dr. Parr, who immediately plunged into the darkest recesses of ancient learning: the refinements of the Greek language, and the works of the critics who had illustrated it, were entered into, and gradually the conversation changed to the Hebrew, its peculiar construction, and its analogous tongues: here Richard had evidently the advantage; and after an attempted inroad into the Chaldee, the doctor precipitately retreated; leaving a token of his liberality in the hand of the poor scholar. Richard was afterwards asked what he thought of Dr. Parr? He replied, “he is less ignorant than most men.”

Knowledge—school knowledge, as I may denominate it—is not medicine. Observa-

tion is not medicine, unless we have previously acquired the knowledge of what to observe. The art of selecting remedies is not medicine; it is, when unsustained by observation, and by a thorough knowledge of the vital powers of the body, the most questionable of all the faculties embraced by the physician; the most empirical and the most dangerous. Then, again, let me ask what are the requisitions for medical knowledge? Undoubtedly, in the aggregate of all these qualities. And as they are dissimilar, and hold no necessary relation to each other, so I may infer that there exists in the mind no combination of qualities to the total of which the term “genius” can correctly apply, however fruitful in the production of superior excellence in the details of the professional character genius may appear, and undoubtedly is. The requirements are numerous and diversified; a man exhibits a genius for one or more requisitions. It is rare that any one mind is possessed of all—to possess all, is to constitute the really great physician. Now, gentlemen, I address myself not only to you who are commencing attendance on Lectures, but to others who are advanced in the path of education; I have stated the number, the nature, and importance of these acquirements. There is perhaps scarcely one of you who has not already subjected yourself to the inquiry, am I possessed of this or that faculty? and if you will do your duty, you will still reflect on the subject which should form the material for a great deal of after-thought.

I venture to give you advice, because advice, when good, ought to be valued; and it is my duty in this office, (which, as I tell you, I have most unwilling undertaken,) to smooth the path of future inquiry by pointing out the direction before you in the most intelligible manner I am able. Now I beg you to understand that the advice I give you, and am about yet to enlarge upon, relates to two distinct and equally important requisitions of the medical character—the intellectual, and the moral. That which I have already given relates chiefly to the former.

You will observe, and readily I have no doubt, that the path I have pointed out to you leads in a direction far beyond the critical hour in the life of a medical man, at which the functions and duties of a student merge into those of the practitioner. So extensive is the field of inquiry in the study and treatment of disease, that it behoves me to qualify in some measure the assertion I have just made relative to the date of studentship. The crisis occurs but nominally at the date of passing the tribunals of the College or Apothecaries' Hall. We are all students throughout

life,—observing new facts, inventing new devices; and employing new and untried agents. The two main requirements of the student's life consist in his obtaining the school knowledge, and his cultivating the power of observation. With regard to school knowledge, you will be required to attend abundance of lectures, and to hear discussed a vast deal of matter good enough in itself, and quite worthy the attention of any gentleman of property who has plenty of idle time on his hands, but a considerable proportion of which is but little subservient to the purposes of practical life. All I can say to you on this head is, that I advise you, as far as in you lies, to distinguish the *practical* from the *ornamental*.

You have all seen our hospital prospectus, and no doubt have marvelled at the numberless subjects that are required for attendance. I am known to have, as I conceive, so just a dislike to the present system of hospital education, that I only attribute the kind confidence reposed in me by my colleagues in this great lecture year of 1851 to the fact that I can exercise little influence in altering it. But I will tell you, and in a few words, in what I, with many others, differ.

You may readily infer, from the great importance I have attached to the necessity of cultivating a vigorous power of observation, that that faculty stands highest in my esteem. Observation is the occupation of the mind while at the bed-side of the patient, and you will at once see that a system which occupies you during more than two-thirds of your time in attendance upon lectures is in itself an injurious one. It is no argument subversive of my opinion that these lectures are good, that these appointments are held by eminent men of high scientific reputation, and the subjects taught are really more or less subservient to medicine. In a word, my desire is to see medical knowledge rather acquired by clinical instruction and by clinical observation. At present the base is too broad and massive for the superstructure. There are two strong reasons why it is impossible with advantage to carry out this large, and otherwise unobjectionable, scheme of medical education, for I do not wish to undervalue instruction by lectures when not carried to excess—1st, the want of mental preparation; and 2dly, the brief period allotted to study. If these two objects could be obtained—viz. 1st, preliminary education; and 2dly, that objectionable law which permits the student to enter on the career of practice at the early age of twenty-one—then, indeed, the conjoint education with hospital duties, by the large

number of lectures now embraced in the prospectus, would be valuable.

Now the only mode in which you can remedy the present evil is to devote as much of your time as possible to the study of disease in the wards of the hospital, to render yourselves practical men—ornamental if you can, but certainly practical. If you learn nothing else, learn disease; that is what I mean by the term practical. If you will learn disease, the general treatment will readily follow. I do not say you will necessarily acquire that eagle vision which rests or relies on the co-operative aid of the imagination for its highest excellence, but you will at all events render yourselves superior to others.

I have spoken of motive. There is in our struggle for superiority a conventional motive, and there is a *real* motive, which animates the world—that is, two motives, for they differ—a motive that we exhibit to the world, and a motive that we discuss among ourselves in private. That which we display to the world on our professional flag is the *science of medicine*: the motive which really dictates our efforts is that which we hold in common with every other pursuit in life—a desire of independence. That is, in sober truth, the impelling motive of exertion, and a just and worthy motive, too. It is not that I consider it a bad one that I venture to promulgate it, but because it is the true animating effort of every man's life—that is, every *poor* man's, and every man is a poor man in his own esteem; and so valuable and enduring a motive is it that I am quite certain, if I had any power of eloquence to induce you to sail under the flag of "medical science," and change the every-day motive for that which professes to cultivate medicine for its own sake, I should be doing an irreparable injury to the world—aye, even to the cause of medicine itself. No! there is no agent like the love of ease and independence—in other words, like the desire of wealth—to keep the powers of men, whether bodily or mental, on their fullest stretch. I might, indeed, expatiate on the peculiar moral excellencies of our profession, and declare the entire absence of all affinity between the love of science and this human dross; and you would believe me, and you might pay me the compliment to say I had drawn a beautiful picture; but with the morrow would come reflection, and reflection would beget hesitation and suggest a doubt, and a doubt would enlarge into a well-founded suspicion, and hence a *denial* of the truth of my high-flown scheme. There is nothing in this world like truth, after all: we may gild our motives—we may

invest them with all the beauty, and all the brilliancy, and all the purity of abstract excellence—we may decorate them by an appeal to philosophy or science—we may invoke the sacred cause of humanity—we may proclaim aloud that we have trodden under foot the sordid aspirations of a mercenary world, and have sacrificed ourselves at the altar of science; but depend upon it, that, with but occasional exceptions, the *primum mobile* of all human exertion is a desire of independence: and this I say of a profession, with one exception, more exalted, more generous, and more disinterested, than any other occupation to which the human mind is devoted.

It is a notorious fact, as applicable in a higher degree to medicine than to any other profession, that *success* in after-life affords no certain measure of professional competency. Unfortunately, we too frequently observe men, whether by their natural talent or their industry, who have possessed themselves of a more than competent knowledge of their profession, who fail to obtain the confidence of the public; while others, embarking in life with a very imperfect capital of knowledge, have galloped up the hill without stop or difficulty; and, of the two exceptions to the general inference, that competent knowledge is the only sure foundation for future success, the second example is by far the more common; but, in the aggregate, each exception is rare. In order, however, to make the exception, there must exist some weighty attribute beyond those I have sketched, the existence of which is necessary to carry into effect this premature issue. This attribute consists in a knowledge of mankind,—an instinctive insight into character and people—accurate observation in an extra-professional sense, to which is superadded somewhat of unscrupulousness, and generally the absence of over-refinement, or delicacy of feeling, which, it must be confessed, form a continual bar to a man's success in life. A kindly disposition, and the possession of other forms of social excellence—these are great desiderata, supposing professional success were our only aim and object; but I should be justly charged with giving you very bad advice if I were to urge on you the cultivation of social at the expense of professional excellence. No! if you desire to attain professional superiority, cultivate *knowledge* as the only sure foundation. A man is more correctly estimated by his professional brethren than by the public. I remember to have read an advertisement for a medical man in a district in the west of England, which concluded thus:—"A gentleman who hunts will be preferred." On another occasion I was applied to to

nominate a medical man to undertake the practice of a gentleman deceased: the applicant added, "It's of no use unless your friend can play a good hand at whist." It so happened that my friend *did* play a good hand at whist; and the three gentry of the neighbourhood *revoked* their decision in favour of another man, and took him by the hand. In the first instance, I presume, it was deemed desirable by the *hunt* that it should be attended by a surgeon in case of accident, and I presume that it may have rendered the hunt more popular throughout the neighbourhood should they have the power to make known to the public by advertisement of the "meets" of the week, that, like an export-ship, "they carried a surgeon." As a mere accomplishment, of course, we can see no objection to the gentleman who plays a good game at whist, and the cultivation of that talent is in no respect reprehensible, so long as it does not encroach on higher and more important occupations; for I, for one, would rather encourage this kind of social excellence; but I doubt whether, weighed in the professional scale, such a man would win credit from his professional brethren. Whist, like other legitimate amusements, may follow in the wake of higher qualifications; but this, with similar accomplishments, should never be made the means of professional advancement, whatever the squire or parson of the parish may think to the contrary.

Having spoken at such length as is compatible with an introductory lecture on the medical requisites for success, let me now place before you my notions of the moral attributes of the professional character. We have duties to the public, and duties to the profession. Compared with others, there is no profession so exclusive, or so independent in its character, as medicine—none which takes so little cognizance of the personal inclination of the applicant—none in which the co-operation and consent of the consulting person are so little consulted.

In religion and law, every member of society is supposed to possess some amount of personal knowledge—in medicine, almost none. To be sure, there are occasions on which men have recourse to their pill and black draught, and every man acquires experience in the management of his own health, so far as to abstain when necessary from his daily quantity of wine and other stimulants. But this fact forms no exception to the general principle. We do not consult our patient whether we shall employ this or that medicine, nor whether we shall treat his disease on one or another principle: we exercise an unbounded authority so long as the patient remains

under our charge. To the uninitiated patient his treatment is a mystery. In proportion to the authority exercised should be our forbearance: we should forbear to encroach one line beyond the boundary prescribed by the nicest sense of honour. The laws of honour constitute the ideal of justice. Justice is a mere debt paid to society—honour, a generous gift. It is sufficient, however, that we do justice—that we mete out to others our own measure of right.

I prefer to make justice the standard rather than honour, because justice is within every man's reach: honour is the attribute of the few—justice of all. The terms are too frequently misapplied. We speak of such a one being an honourable man—we usually mean a just one. The world has claims on our justice, none on our honour. There is in our profession, as, indeed, in all others, a tendency, a warping of the mind, which impels it to encroach upon the public; and it is against this tendency that I warn you: your best protection is by a careful cultivation of the spirit of justice.

In the remarks I am making you will observe that I endeavour to confine myself to the requirements of the profession of medicine, and I do not intend to exceed this boundary. If I suggest to you a line of morals, it is the morals of medicine—the conduct of life appertaining to our profession, because it is an important element of success. If I transgress the boundary, I feel I should have less claim on your attention. It is true that there are higher and more important matters than these, compared with which those I am discussing are comparatively insignificant. *There are seasons for all things, instructors for all subjects.* I aspire simply to the effort which tends to make you gentlemen, and, morally speaking, with this I am content. I employ the term in its most comprehensive sense. It is a word on the lips of every man; its true meaning is rarely sought or applied; it involves morals, conduct, means, manners, and accomplishments. Property cannot affect or imitate it; manners, although indispensable to the perfect character, may be acquired without it; morals may be pure, conduct unquestioned and unquestionable, and yet the individual may fall short of the perfect character of a gentleman. To the ideal standard of excellence it must be your effort in life to approach. The range is wider than you imagine: it embraces a man's entire government of himself, both moral and intellectual; and because few men reach this ideal standard, the character might, perhaps, be more easily illustrated negatively. Now, one of the first and most striking characteristics of a gentleman is *his sensibility to the feelings*, and the power of adapting

himself to the wishes of others. Your conduct here should be as consistent with the conduct of gentlemen, as in after-life; that conduct, to condense it in a word, is the strict observance of your social duties. Every gentleman will be a strict observer of the order and discipline of his school: the industrious man has neither time nor inclination for cabal or disputation; from all such sources of evil, the gentleman stands aloof. It is almost a sequence that the most industrious men are among the best conducted members of a medical school. I will give you a motive additional to that first and highest of all—viz., the act of doing right for its own sake: I mean this:—The seats you occupy will be next year filled by men who will look up to you for an example. I trust you will endeavour to uphold, for the sake of that institution of which you have become members, the high reputation it has deservedly acquired; that while you imbibe the principles of Harvey, of Pott, and of Abernethy, traditionally existent in the wards of this great institution, you will, in your own persons, illustrate the value of moral culture.

I would urge you by my personal interest in yourselves, and by the veneration I bear to St. Bartholomew's Hospital, to endeavour to acquire a high tone of mind—to adopt higher motives of conduct than such as do not invariably predominate in our profession.

If I have acknowledged,—because I am satisfied that where an evil lurks it is wiser to expose than to conceal it,—that we work for independence, and that wealth is the great instrument by which this independence is to be acquired; yet you must recollect we are not members of a trading community: you are members of a high profession, exercised, first for the benefit of *the public*, and next *for yourselves*. You have acknowledged this important principle; it is the most striking characteristic feature distinguishing a profession from a trade. By adopting medicine as a future pursuit, you have virtually conceded this paramount feature. Retrace your path—turn druggist, or turn draper if you will—but observe the condition of your adhesion to the profession of medicine consists in this, that society is the first great object of your interest, and any deviation from the path of honour, or of justice towards the world, is a breach of contract to your professional brethren.

You will hear of professional etiquette: by etiquette we understand the rules of courtesy practised by gentlemen towards each other. There are specific rules for all professions; but however valuable such regulations may be when observed for the purpose of maintaining harmony and good-

will in our own circle, they can never be upheld at the expense of the community. Here lies a common error, and often a greater evil results. A physician is required to prescribe for a patient, but the etiquette of our profession precludes his personal resort to the only agent to be employed—viz. the abstraction of blood. A person has consulted his family medical man; dissatisfied with inefficient treatment, he appeals to a second authority for relief, upon which No. 1, the usual attendant of the family, takes offence both with the patient and the party consulted;—as though a person had lost the right to consult whatever doctor he chose to select! Etiquette, as I have said, is for our own government, and its influence should never radiate beyond the circle of our profession.

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When will the medical profession reach the goal of that admirable simplicity which constitutes the beau ideal of all greatness, whether in science or in art!

In the career of the accomplished gentleman there is nothing of meanness, nothing of boast, nothing of vulgarity; in his conduct he is just, in his manners easy,—literally because there is no reason why he should be otherwise: there is refinement in his actions and a polish in his sentiments. He is unobtrusive, yet firm in right, and a strict observer of the courtesies and the refinements of social life. He is not the captious assertor of his own importance, he concedes that advocacy to the charge of others; while striving to obtain his own pre-eminence he is cautious lest he interfere with the rights and privileges of others. Invidious of no man's superiority, his mind revolts from an act that would fear the gaze and scrutiny of the world. As a member of our profession, his effort in life is to uphold its character, and to enhance its dignity by his own example. The same rigid observance of justice which precludes his resort to unfair dealing with his patients in his daily ordinances, dictates his aid in difficulty, his sympathy in distress. He scorns the narrow selfish view of his personal comfort, and adopts the broader principle of interest in those consigned to his professional charge. This is one great secret in the attainment of success in after-life. Charity to suffering humanity is but justice. A just man possesses the highest attribute of the upright gentleman.

Whether students of St. Bartholomew's Hospital, or members of the great fraternity of medicine, fail not in your responsibilities. You have first to acquire such knowledge as will enable you to

carry into active life the highest principles of your profession; and secondly, to exercise that profession for the benefit of the world.

If I have descanted on the imperfections of our calling, it is only that you may avoid them. It is wiser, in my judgment, at once to explore and to proclaim the defects of a system, a calling, or a creed, and to make such exposition the starting-point in life, than to build upon a sandy foundation, which renders the future edifice unsound, and insecure. I could with greater pleasure observe upon the excellences of our profession, its exalted aims, its indispensability to society, its high aspirations, its inherent title to the respect and admiration of the world; nor should I overcharge its claim.

These excellences will develop themselves as you advance; and I would venture to hope that many among you at least may add to their brilliancy by the pre-eminence of your own conduct and character.

That future character will take the stamp of your conduct here. Be assured that we take cognizance of the career of all, and can predicate with tolerable certainty their future success or failure hereafter. May your career in London give a bright augury of your future eminence, that you may take your stand by the side of Hodgson, of Owen, of Kiernan, of Barnes, of James, of Crosse, of Mayo, of Bond, and a host of names who have commenced their professional career within these walls! Be industrious, be methodical.

On this fertile topic I need not dilate, but will conclude this imperfect exposition of our duties in the elegant and expressive language of the illustrious Coleridge:—"It is not solely in the formation of the human understanding, and in the constructions of science and literature, that the employment of method is indispensably necessary; but its importance is equally felt and equally acknowledged in the whole business and economy of active and domestic life. From the cottager's hearth or workshop of the artisan to the palace or the arsenal, the first merit—that which admits neither substitute nor equivalent—is, that everything is in its place. Where this charm is wanting, every other merit loses its name, or becomes an additional ground of accusation and regret. Of one by whom it is eminently possessed, we say proverbially that 'he is like clock-work:' the resemblance extends beyond the point of regularity, and yet falls short of the truth. Both do indeed at once divide, and announce the silent and otherwise indistinguishable lapse of time; but the man of methodical industry and honour—

able pursuits does more—he realises its ideal divisions, and gives character and individuality to its moments. If the idle are described as ‘killing time,’ he may be justly said to call it into life and moral being; while he makes it the distinct object not only of the consciousness, but of the conscience. He organises the hours, and gives them a soul; and to that, the very essence of which is to fleet and to have been, he communicates an imperishable and spiritual nature. Of the good and faithful servant whose energies, thus directed, are thus methodised, it is less truly affirmed that he lives in time, than that time lives in him. His days, months, and years, as the stops and punctual marks in the records of duties performed, will survive the wrecks of worlds, and remain extant when time itself shall be no more.”

POISONING BY FLEMING'S TINCTURE OF ACONITE.

AN inquest was held in London, during the last week, on the body of an excise officer, who died from the effects of a dose of Fleming's tincture of aconite, which, it appears, he had tasted in the course of his duties. It transpired at the inquest, that a case of what was called “medicated spirits” had been received from Scotland, accompanied with a permit. One of the gaugers took a bottle out, containing one-fifth of a gallon, poured a small quantity into a glass, and having dipped a piece of wood into it, drew it across his lips. Deceased, who was present, was asked his opinion of the spirits; and it is supposed that he swallowed a small quantity, although he was not seen to do this. It was afterwards observed that the bottle had a label, on which were the words “Fleming's Tincture of Aconite, Poison,” in large letters. Deceased left the office apparently well, but in about two or three hours (for the time is not exactly stated) he was brought to the surgery of a medical practitioner in a state of exhaustion, and he died soon afterwards, evidently from the effects of the dose of aconite which he had swallowed.

The practice of importing, under the name of “medicated spirits,” so formidable a poison as tincture of aconite is highly reprehensible. The “permit” ought certainly to indicate the dangerous nature of the liquid.

Original Communications.

DR. RAMSBOTHAM'S REPORT OF CASES

THAT OCCURRED IN THE EASTERN DISTRICT OF THE

ROYAL MATERNITY CHARITY.

[Continued from page 584.]

DURING the year 1845, there were delivered in the Eastern District of the Royal Maternity Charity, under the superintendence of Dr. Ramsbotham,

1819 Women,—of which cases

23 were twins—one in about every 79 cases: of these in 14 cases both heads presented; in 6 the presentations were head and breech, or inferior extremities; in one the presentations were breech and footling, in one head and head and hand, and in one case the first foetus presented with the breech, and the second transversely. In 4 of these cases the children were both boys, in 8 they were both girls, and in 11 one girl and one boy.

966 children were males.

876 children were females.

1804 were presentations of some part of the head; of which 2 were face presentations, or one in 921 births.

32 were presentations of the breech, or some part of the lower extremities—one in about every 57.5 births; of these 9 were twins.

6 were transverse presentations—one in every 307 births, of these one was a twin. Of the 6, two were born alive, and of the remaining 4, one was complicated with partial placenta presentation at full time; one was expelled double at 6½ months, and the two others died in transitu. In all (except the premature), the operation of version was performed.

In 8 the placenta was entirely, and in 5 partially, implanted over the os uteri—one in nearly every 140 cases. In the instances where the os uteri was completely closed by the placenta the children were *turned*, and the same practice was adopted in 3 of the cases of partial presentation. In the remaining 2 the children were born naturally

after the membranes had been artificially ruptured. All the women recovered, but six of the children were born still.

6 were complicated with dangerous hæmorrhage before delivery, *not* the result of placental presentation—one in about every 303 cases. 5 of the children were born naturally, after the artificial rupture of the membranes, 4 living, and 1 still. The other was a case of breech presentation, and was artificially delivered. The child was still, and the mother died immediately afterwards.

In 6 cases the placenta was retained within the uterus, either by atony, or irregular contraction of the uterine fibres, or by morbid adhesion between the placental and the uterine surfaces, so as to require the introduction of the hand for its removal—one in about every 303 cases. None of these cases was attended by any other remarkable circumstance, and the women all recovered.

10 were complicated with dangerous hæmorrhage after the natural expulsion of the placenta—1 in nearly every 182 cases. All the women recovered.

5 were delivered by craniotomy—1 in nearly every 364 cases. The first was a case of breech and funis presentation, with hydrocephalus, and it was found necessary to perforate the head after the body was born.

The second was also a breech presentation, in a small pelvis; the third, head presentation, small pelvis, where the os uteri was much swollen from pressure; the fourth, funis, arm, and head; and the fifth was a case of extreme contraction of the pubic arch. The women all recovered, the last-mentioned one suffering from paralysis of the bladder for a week after delivery.

3 were delivered by short forceps, one in nearly every 606 cases—one of them under puerperal convulsions. In all the cases the children were still-born.

1 of the still-born breech cases was delivered by the aid of the blunt hook. The woman had a contracted pelvis, and never had given birth to a living child.

2 were complicated with puerperal convulsions—in one case there were 30 fits before delivery, (which was effected by forceps) and one afterwards. The woman was attacked soon after by inflammation of the lungs, but ultimately

recovered. In the other case, a single fit, preceded by dizziness and blindness, occurred 18 days after delivery. The woman remained insensible for 15 hours after the fit, but afterwards perfectly recovered.

4 women died within the puerperal month, or from puerperal causes—being one in nearly every 454 cases; only 3 of them as a consequence of labour, or one in about every 606 cases, the other death being due to phthisis.

1778 children were born living.

64 still—or one in about 28·4 births.

Of the Deaths,

1 was immediately after delivery, in consequence of profuse accidental hæmorrhage.

1 was on the 12th day, from peritonitis. The patient was much alarmed soon after labour, and shivering began almost immediately.

1 was on the 5th day, from abscess in the uterus.

1 was on the 9th day, from pneumonia, which had existed a week before labour. It was the consequence of phthisis of seven months' duration.

Of the still-born children,

6 were premature.

7 premature and putrid.

7 putrid at full time, or nearly so.

10 were breech presentations, of which 4 were premature, and 2 putrid at full time.

2 were transverse.

3 were under complete placental presentation.

3 under partial placental presentation.

2 were under accidental hæmorrhage.

5 under craniotomy.

2 were delivered by forceps, there being a small pelvis.

2 were monstrous.

8 were under lingering labour.

1 under convulsions, by the forceps.

1 after an accident to mother.

1 after fright to mother.

1 under prolapse of the funis.

1 a face presentation.

1 a secondary foetus, at 5 months (the other fully formed).

1 under hand and head presentation, in which the surgeon in attendance found it necessary to turn.

ON THE
INFLUENCE OF VARIATION OF
ELECTRIC TENSION,

AS A CAUSE OF DISEASE.

BY W. CRAIG, ESQ.
Surgeon, Ayr.

[Concluded from p. 533.]

IN contemplating the practical measures prompted by the views enunciated in the two previous papers on this subject, it is so far satisfactory to find that many of those measures which are generally recommended, and which have been long followed in medical practice and common usage, lend their support to the principles here advocated.

When it is borne in mind that electricity is such an important element in the animal economy, concerned in every vital action there, it will be always proper to watch over and guide the amount of electricity which continually radiates from the body. The leading indications will evidently be, the use of means to prevent the escape of the vital electricity in such quantities as could not be without injury spared. It is for this purpose that raiment is worn by the human species, and that the lower animals have been covered with feathers and hair. Imperfect protection from over-radiation of vital electricity gives rise to many diseases, and causes that state of the body which in popular language is known by "having taken cold." Those textures, then, are best adapted for clothing, which protect the body most effectually from the escape of electricity. Woollen clothing, on this ground, is remarkably valuable, and it is very generally used. It is on account of its non-conducting property that it is found so valuable when worn next the skin. Indeed, it is by their non-conducting property that textures are estimated and chosen to be employed for clothing. Silk, in consequence of possessing this qualification in a high degree, is well adapted for wearing apparel, and it has been extensively used, and principally for showy vestments, and with little respect to the non-conducting properties in its character. To obtain the full use of silk to serve the purpose of maintaining the warmth of the body, it ought to be

used as an under-garment, just outside the flannels, which are next to the skin. Cotton and linen have the non-conducting property in a somewhat inferior degree, but form valuable auxiliaries, and are extensively used.

Next in importance to vestments for the body are comfortable houses for habitations. Care, therefore, in the construction of houses, and prudence in the selection of situations for building them, are of great importance for protecting the system against abstracting influences. The houses of the poor in many situations are most injurious to the general health of the inmates: the lowest and most humid part of a town is usually occupied by this portion of the community, close to a stream or river exposed to occasional inundations, which leave the houses miserably cold and damp receptacles, primed with the elements of disease and death. It is in localities such as this that pestilential diseases first make their appearance, and they continue to linger there after they have left more favoured situations.

It has always been held that insufficient ventilation and the crowding of many persons together in small apartments, has been a prolific cause of the spread of epidemic disease, when it has found its way amongst them. That such circumstances should be deleterious there can be no doubt, but from other causes besides the operation of contagious or infectious emanations. The crowding together of a large number in small and ill-ventilated places causes a vitiation of the air, by accumulation of the carbonic acid which is expired; and the inhalation of this adulterated air mars the decomposing operations in the lungs, and thus the blood is left more or less contaminated by the retention of what ought to be thrown out, and there is thus a diminution of the development of electricity for the support of vital power. The same necessity which causes the crowding together will often cause an insufficient supply of nutritious food, and consequent diminution of extrication of vital electricity during digestion and assimilation, and also attenuation of the composition of the blood from the curtailed supply of the primary elements of the body. Superadded to these unfavourable circumstances, the floor of the little apartment may be made of

mud or stone, which, from careless or filthy habits, may be kept constantly wet: a powerful agency is thus created of a detracting nature; the feet, or some other unprotected portion of the body, being kept in contact with the floor, will permit the long-continued action of this good non-conducting medium, which will withdraw the electricity in larger portions than will be consistent with the healthy performance of the vital functions. It will always be important to protect the body well during sleep from all abstracting influences, as then the operations for elimination of electricity are much less active, as respiration and digestion are more slowly performed. Lying on a damp bed on this account will be very injurious, as the electricity would be withdrawn from the body to promote the evaporation of the moisture contained in the bed clothes. Many cases of severe illness can be traced to exposures of this nature.

In marshy districts, where endemic diseases prevail, some of the dwelling-houses are considerably elevated above the surface by means of wooden pillars, with a view to avoid the evil influences of the malarious emanations which are supposed to arise around them. This expedient has been adopted, because, by experience and observation, it has been found that such an arrangement is more conducive to health in these countries than when the houses are built on the surface. I am not aware of the height necessary to be attained before the poison is divested of some of its virulence, but I would suspect that a much higher elevation would be required for a house to be safe, than is consistent with the convenience of access, before getting out of the reach of the obscure destroyer. Although it is difficult, with the view hitherto entertained, to understand how the elevation of houses on pillars of wood should cause them to be more wholesome in malarious localities than those which are placed on the surface of the ground; yet, on the principles here maintained, a plausible and even satisfactory reason can be assigned. The wood which composes the pillars will, in tropical regions, be well baked by the heat, and the wood thus baked is converted into a good non-conductor of electricity.* A

house so situated is in a great measure insulated, and the inmates are thus defended against the abstracting power of the evaporating surface below. There is a security, too, that the floors of these elevated houses will be made of wood, and, if covered with a carpet, the wool will still further provide for the insulation. On the contrary, when the floors are made of stone, which of itself is a good conductor, and which of necessity must be near the surface, and will be affected with alternations of temperature, of dryness and moisture, and will thus provide an excellent conductor of electricity, which will act on any part of the body which may be made to rest on it. The insulation of dwelling-houses in marshy districts will, on these principles, be of great importance. It is in their houses that people pass the greater portion of their time; and if they were completely separated by insulation from the surface around, which, by the copious evaporation, is subjected to a largely diminished electric tension, they might escape those consequences that depend on an unfavourably altered condition in the electric relations. With reference to the insulation of the body when out of doors, as the feet are more in contact with the earth and conducting surfaces than any other part of the body, it will evidently be important to have them well protected with good non-conducting substances. Wool and leather are in common use, and when the former substance is kept dry, the object is pretty well accomplished. Gutta-percha is a good non-conductor, and will be useful where its consistence is not affected by temperature.

Nature has exercised great care in adopting means to prevent the escape of electricity from the animal portion of creation. In those cases where the hair is not given in sufficient quantity to accomplish this purpose, a large amount of fatty matter is deposited in the cellular substance immediately under the skin, as in the case of the hog and other animals. The infant of our own species, too, in whom vital electricity is of so much importance, is well supplied with this protecting provision, as all the salient points in the frame of the little being are buried in the exuberance of its own fat, displaying that Wisdom in which there is no imperfection. It seems to be a contrivance, at this early period of human existence,

* It is assumed to be plunged into a soil constantly wet; and what is to prevent the elevation of water by capillary attraction?—ED. GAZ.

to provide for the possible neglect of unnatural and improvident parents. It is sometimes melancholy to observe the fatuity of some parents in fashionable life, where the poor little creature is often exposed to the chilling effects of a northern blast, with the extremities half covered, and the countenance exhibiting a livid aspect, eloquently appealing to the sympathies of the passer-by, but vainly to the parent, who is the slave of fashion, and at all hazards must have her boy dressed *à la mode*. There is a persuasion also in some quarters that children are improved by exposure, as it hardens them against the cold; but in the case of delicate children, who are less favourably provided by nature, this hardening process just hardens them for the grave.

This theory will have a particularly important bearing on the question of contagion. It would be very desirable were this question set at rest, as it has been long observed that apprehension and disturbance of the mind predispose to what have hitherto been viewed as infectious diseases. It would be difficult to demonstrate that the concentrated emanations from the bodies of patients labouring under fever are innocuous and inoffensive, as experience has long proved the contrary to be the truth; but I believe that they are less influential than they are commonly supposed in producing mischief, and that fever is more usually dependent on the altered electric relations of the body; and these alterations may be consequent on the circumstances and influences affecting those individuals who may be living in near proximity to patients labouring under fever. For illustration, we may be allowed to suppose a case:—A member of a numerous family becomes affected with fever; the members of this family have the same constitutions and the same predispositions; they eat at the same board, they dwell in the same house, they are clad, it may be, with the same fabric; and in all things which affect them, either morally or physically, they are the same. The house is not so large as to allow the patient to be placed at a distance from the other members, and, conscious of the near proximity of fever, and being firm believers in the contagious nature of the disease, they are filled with fear and apprehension, both for their friend and themselves. They can neither sleep

nor eat, because of their sympathies and alarms. The wakefulness tends to exhaust the nervous energy, and, by the disturbance and suspension of digestion, the electricity is withheld which might have been evolved had this process been active and continuous; from these causes, also, the nervous system becomes less vigorous, less able to continue the processes of assimilation, secretion, and excretion; the blood becomes vitiated by the elements that ought to have been thrown out of it; and hence the derangements that might constitute fever.

Independently of all external agency operating on the body in the form of what is generally viewed as contagion, there are in my opinion, in the circumstances supposed above, changes in the blood sufficient to account for an attack of fever. It is now generally admitted by physiologists that the blood, in almost all diseases, becomes altered and deranged. The nervous system is the starting-point of disease; the blood is secondarily affected in consequence of the inability of the nervous system to withdraw from it those elements which ought to be deposited to maintain the body, as well as those which are required for the elaboration of the secretions and excretions; and the solids are third in the arrangement of the morbid process. Diseased action in the solids will follow from these alterations in the blood sooner or later, and that to a smaller or larger extent according to the constitution of the individual affected. The grosser elements which are left in this fluid will cause, in irritable constitutions, a stretching of the coats, and consequent enlargement of the calibre of the capillaries, before the increased bulk of sanguineous fluid can pass through them; and thus constitute the proximate cause of the pain in inflammation, the seat of pain and inflammation being determined by the tenuity of the walls of the capillaries in the region affected. The propelling power of the heart and arteries, too, will be called into increased exertion to press the grosser sanguineous fluid through the capillary system, and in this way cause the development of the hard and resistant pulse of acute disease.

Vegetable life, in my opinion, is maintained on the same principle as animal life, but in a less vigorous and more modified form, and the diseases

which appear in this portion of organised structures are produced in a somewhat similar manner. There is this difference, however, in the case of vegetable life, that free electricity is indispensable to its existence, whilst animal life could be supported quite independently of it.

On contemplating the anatomical structure of vegetable bodies, the attentive observer will perceive that, however diversified in their magnitude and various in their habitudes, there is a striking similarity in their structure, which points to a uniformity in the sources of their vitality and nourishment. There is the same elongation of fibres from the roots to the leaves—the same tubulated provision for carrying up the liquid nutrition; and, if the science of vegetable physiology were sufficiently far advanced as to have determined the principle of vegetable life, then might that portion of the structure of the plant be discovered which is destined to be the medium of its operation. In vegetable as in animal life, there is, although in an infinitely smaller degree, evolution of electricity; and this arises from a portion of the latent electricity being set free during the decomposition of those elements which are in preparation for being assimilated as nourishment to the growing vegetation. Before electricity can be evolved in vegetable existence, it is first necessary that solar or free electricity operate on the plant, and produce chemical action; and it is by the decomposition produced by this chemical action that latent electricity is liberated. Solar or free electricity, then, is the prime mover in vegetable life. This is demonstrated by the rapidity of growth which results from the heat of the sun, or of that which is artificially applied by other means. Indeed, electricity has frequently been applied directly to the roots of plants with the greatest benefit. The vegetation has been thereby increased more rapidly, and rendered more bulky; and so sanguine have some parties been in their expectation of the efficiency of this agent, that they have expected that the time would come when the necessity for manure would no longer exist. A writer in the *Gardener's Chronicle* for 1845 states:—"I have long looked on all manures as mere conductors of electricity to the roots, and that just in pro-

portion as they possess this quality are they good or bad." . . . "I believed that the day was not far distant when all such dirty and expensive appliances would be superseded by electricity."

I cannot understand on what grounds this writer can expect that electricity can contain the constituents of vegetable bodies, so as to render its exclusive agency sufficient to supply vegetable substance. The primary constituents of vegetable bodies are supplied by the soil; and, when the soil fails, the manure is used for the substitution of that which is wanting. During the growth of a plant, electricity makes the selection of, then attracts, and finally appropriates the vegetable constituents. By directing electricity to the roots of vegetables, that which nature supplies is further supplimented, and the plants are thereby enabled to extract more vigorously from the soil those constituents which are required to form the growing structure.

In carrying out these views, it will result that, in proportion to the quantity of electricity applied to the plants—up to a certain point—and the amount of nourishment present to be taken up, so will be the vigour and luxuriance of the vegetation; and it may be presumed that a given portion of this fluid is indispensable to the perfection of the structure and organisation of the plant. It will result, also, that, in proportion to the speed with which a bulky vegetable arrives at maturity, so will be the demand for a large supply of electricity to separate the great number of constituents which will be required to form the plant. The potato is a plant of this rapid growing character; it sends forth a thick stem, with an abundant foliage, that spreads out in the greatest luxuriance, and produces at the roots bulbous bodies, which acquire a large size in a very short period. In proportion, then, to the rapidity of growth and the bulk attained by a vegetable body, so will be the necessity for a strong electric agency to effect the appropriation of the primary constituents which produce the increase of bulk.

It will be evident, then, that the potato will require a proportionally large quantity of this instrumentality, as well for securing the proper size of the tubers as for the integrity of their organization; and it will follow, that if this living principle of vegetation be with-

held, or be inadequately supplied, then will both the organization and the size be unfavourably affected. In this manner may have been produced the disease which operated so destructively on this useful plant a few years ago. When an examination is made of the anatomical structure of the healthy potato by the microscope, it is found to be composed of cells of a hexagonal shape, and filled with starch granules of different sizes, and these, with the envelope of the tubers, constitutes the whole potato. On subjecting a potato with the disease as it appeared some time ago to the same examination, its condition was very much altered: in one stage of its progress to destruction the cells continued to exhibit their hexagonal shape, but in place of being filled with granules of starch in their usual state, they were occupied for the most part by small dark bodies, which had scarcely any of the primary principles which enter into the formation of the starch. In a potato still nearer destruction, the starch granules were totally absent, and, where they had not degenerated into complete disorganization, the cells had become changed, and had lost their usual form.

In considering this theory, it appears to me that there is nothing more evident, than that heat—electricity—is indispensable to vegetable existence: but there is some difficulty in understanding how it operates. There is every reason to believe, however, that its operation is after the manner of the processes with electricity in philosophical experiments. By directing attention to the ultimate roots of vegetables, they appear, both in their structure and distribution, to favour the idea that their duty in the vegetable economy had some relation to the attraction of electricity. If the part assigned the roots be merely to provide a conduit for the nourishment of the plant, their construction would not be as we find them. Instead of being dense in their construction, and terminated by elongated and attenuated points, they would be more evidently tubular in their form, and spongy in their terminal points, to enable them to absorb the food and convey it to the plants. The artificial contrivances usually constructed as electric conductors uniformly terminate in points, as in this form they more effectually attract electricity from the clouds. The delicate fibres also which are so numerous about

the roots of the greatest number of plants seem to have a like duty to perform, as they permeate the soil, and present numerous points for attracting electricity. The potato is most abundantly provided in this respect. It has numerous elongations of the roots, which are plentifully covered with these hair-like fibres, and are remarkably so furnished just at their terminations, forming the appearance of a brush. In all probability the elongations from the roots of those vegetables contain arrangements analogous to the electric, where decomposition of the compound bodies in the soil around them is effected, and the assimilation and appropriation of those constituents which form the several portions of the plant, the needle-shaped fibres spreading all around, attracting the necessary supply of electric fluid.

When we consider the large amount of assimilating power required, and admit that electricity is that power for producing the constituents of the potato from the compound bodies which surround it during its growth, and that the tuber is completed in a comparatively short time, it will at once appear that the means for attracting it must be equal to the necessity. The abundance of hair-like fibres supplied, and their apparent adaptation as electric attractors, indicate that a large supply is obtained.

By glancing at the composition of the tubes of the potato plant, we find that a great part of its bulk is formed of starch granules, which are composed of the three primary bodies, oxygen, hydrogen, and carbon; but the oxygen and hydrogen do not exist in these granules in the same proportion as they do in water, neither do the oxygen and carbon exist in proportions to form carbonic acid. They cannot, therefore, be simply appropriated, but must be produced by the decomposition of the bodies surrounding them. This consideration indicates that a large amount of electricity is required in the growing process of this vegetable, as at a single plant there are frequently a great many tubers.

Now admitting the correctness of these views, it will happen, that unless a sufficient supply of electricity be presented to accomplish the decomposing and assimilating process, the plant must suffer in proportion to the quantity withheld. It was in all probability on

this principle that disease in the potato arose.

Free electricity pervades every body, and it is from bodies near them that vegetables are supplied with this fluid. It will follow, then, that any cause which to a certain degree diverts this free electricity from a region where there are active vegetable operations, producing low electric tension, or in other words causing it to be highly negative, then will these operations of assimilation and appropriation be marred, because of the abstraction of that amount of electric power which is indispensable to supply vegetable currents, to provide the primary elements, and to maintain those operations which are essential to the integrity of the organization of the plant. In the diseased potatoes it was found that the nutrition was defective, that there was not a sufficient number of constituents to build up and perfect the structure of the tubers, and hence the speedy decomposition which this plant exhibited to such an unfortunate extent a few years ago.

The disease which still appears to a certain extent in the potato plant does not depend on the existence of the cause which at first produced the general failure. The plant at that time became deteriorated in its organization, and when it has been employed to reproduce a succeeding crop, it communicates that delicacy of structure which causes it speedily to decay. The potato is placed somewhat in the circumstances of the debilitated and dissipated of our own race, who communicate to their progeny the impress of themselves—that state of body which causes them readily to become diseased. In so far as regards the potato, it is highly probable that every succeeding crop will acquire additional strength, by which it will ultimately be fortified to resist the disease.

Now, what are those influences which may have operated to cause this low tension of electricity? Long absence of the rays of the sun; over-radiation of the electric fluid from the surface of the earth; unequal distribution of electric fluid in portions of the earth by some unknown working of the terrestrial currents; and possibly some unusual volcanic action, producing an accumulation in one region, and thereby causing a hurtful diminution in another.

RECAPITULATION.

1st. That heat and electricity are identical, as the one can be converted into the other.

2d. That a large volume of electricity surrounds every primary constituent of matter, especially that form of matter which constitutes the gaseous bodies.

3d. That animal heat is supported by the electricity liberated from the primary constituents of matter during the processes of respiration, digestion, and assimilation.

4th. That electricity is evolved during these processes on the same principle as that which is evolved during the action of a galvanic arrangement.

5th. That electricity and nervous power are analogous, if not identical; as the action of the one can be successfully substituted for the other.*

6th. That the majority of diseases are caused either by the sudden abstraction or slow abduction of electricity from the body.

7th. That a low state of electric tension on the surface of the earth, produced either by the operation of evaporation or some occult movement in the great internal currents of the earth, is the remote cause of epidemic and pestilential diseases.

8th. That occasional and ordinary diseases are produced by the sudden abstraction or slow abduction of electricity from the body, or its undue elimination during the vital processes.

9th. That since electricity is so essential to the integrity of the vital operations, it is indispensable that measures be taken to promote its evolution and prevent over-radiation.

10th. That electricity is the source of vitality in vegetable life.

11th. That electricity is attracted by the fibres of the roots of the plants; and by the instrumentality of the electric fluid does the plant extract its constituents from the soil.

* This conclusion is, in our judgment, not justified by facts. Nervous power cannot be transmitted by any thing but *nerve*. Electricity may be transmitted by a variety of conductors, organic and inorganic, and of these, nerve is one of the worst. Animals which evolve electricity are provided with distinct organs for this purpose. By nervous power, milk, urine, and bile are secreted from blood. Electricity, in any form, cannot produce these or similar results. They resemble each other in traversing their respective conductors with equal rapidity; but this is not sufficient to establish their identity.
—ED. GAZ.

12th. That vegetables of rapid growth require a large supply of electricity to secure their perfection and completion; and the potato is a plant of this kind.

13th. That the disease in the potato was produced by want of nutrition.

14th. That the want of nutrition arose from defective electric agency.

15th. That the cause of the deficiency of this agency was those abstracting influences which produced low tension of electricity

Ayr, June 4, 1851.

ESSAY ON MENSTRUATION

IN SOME OF ITS PHYSIOLOGICAL AND
PATHOLOGICAL RELATIONS.

BY ADOLPHUS HANNOVER, M.D.,
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[Translated by Edmund Hansen.]

PART I.

ALTHOUGH since the time when Bischoff published his valuable Treatise on the periodical maturation and discharge of the ovum from the ovary of the Mammiferæ, no small number of observations of the same kind have been published, these have but little forwarded the results already obtained, and consequently they have not upon the whole been of any great importance to physiological or medical science. The reason of this is probably, that this matter having been considered to have been sufficiently elucidated as regards the lower animals, difficulties have arisen in proving a complete analogy in the human being. The observations of the occurrence in the latter have been necessarily accidental, whereas in the former they could be made experimentally at any moment.

It has been proved that in animals a mature ovum leaves the ovary at the time of each periodical heat or *æstrus*; that the ovum so discharged then enters the fallopian tube; and that this discharge of the ovum is followed by the formation of a *corpus luteum*. Up to the present time, no proof has been furnished that the ova are discharged at any other periods. Whether the ovum be further developed, or perish, depends on the concurrence

of copulation with its liberation from the ovary, and its consequent contact with the spermatozoon.

It is known that corpora lutea may be found in virgins; and that recent corpora lutea, and ova sufficiently mature to quit the ovary, have been met with in women who have died immediately after menstruation, when no act of copulation had preceded. It cannot, however, as yet be affirmed, that whenever a woman has died immediately after menstruation, a recent corpus luteum or mature ovum has invariably been discoverable. The instances, nevertheless, in which these phenomena have been found coincident, are already pretty numerous. Within the last ten years, attention has been particularly directed to this point, so that it is remarkable that no author, so far as I know, mentions having failed to observe a recent corpus luteum in the body of a woman in whom menstruation had occurred shortly before death. During the time that as Second Physician to the Royal Frederick Hospital, I conducted the post-mortem examinations, I made several observations of cases of this kind, some of which I do not hesitate to communicate.

In a girl 17 years of age, whose virginity was evidenced by the appearance of the uterus and the integrity of the hymen, and who had always menstruated regularly, (when last was unknown), there was found near the surface of the right ovary a corpus luteum about the size of a pea, consisting of a yellow sac filled with reddish serum. The ovary at this point presented a scarlike indentation, and its structure was congested.

The following case is still more exact. Death took place fourteen days after menstruation had commenced. The catamenial discharge had entirely ceased. It seems as if the thickening of the mucous membrane of the uterus, which attends menstruation and is considered as a sign of the formation of a decidua, also extended to the membrane of the tube through which the ovum had passed. The history of the case is not without interest.

E. S., a servant-girl, 27 years of age, formerly of a healthy colour, had always menstruated regularly and copiously. She had suffered for several days from weakness, heaviness in the head, deafness on the left side, and disturbed

sleep. Six days before she came into the Hospital (Sept. 30th, 1843), she had fainted after having descended a staircase of inconsiderable height. This had occurred once before, about three years previously; on recovery she had then felt a sense of oppression at the epigastrium, which was relieved by vomiting a quantity of coagulated blood. The hæmatemesis ceased in the course of two days: it returned on the 29th of September, when she vomited a quantity of black coagula. In a few days afterwards she passed a black mass by the bowels. When in the hospital she complained of headache, ringing in the ears, giddiness, a feeling of faintness on assuming the erect posture, palpitations, and coldness of the extremities. The eighth dorsal vertebra was tender to the touch. Pressure in the epigastrium did not cause pain. Percussion in the region of the heart was obscure over a large space. The bellows murmur was audible with the first sound, and in the carotid arteries. The face, tongue, and gums, were extremely pallid. Menstruation had appeared on the 28th of September, without altering her condition. The hæmatemesis continued during the first day she was in the hospital; it then ceased altogether. The motions, which at first were black, afterwards became rare, and passed from her involuntarily after the administration of several purgatives. Seven days before death, continually increasing delirium appeared; she became extremely restless, throwing about her head and arms, screaming, and complaining of pains in the head and neck. Sleep disturbed. Urine passing involuntarily. The pulse, at first chlorotic and weak, became quick, soft, and at last very small. The means employed, besides purgatives, were iced water, with tonics; Clysmæ foetidum, sinapisms, and a blister to the nape of the neck. She died on the 11th of October, 1843.

The post-mortem examination was made twenty-four hours after death. Rigidity was apparent. The whole body was very pale. The follicles around the nipples were greatly developed, especially on the right side. The dura mater was pale. The sinuses contained only a small quantity of blood. The arachnoid was smooth. The superior borders of the hemispheres exhibited the usual granulated bodies. The vessels of the pia mater were nearly blood-

less; at the posterior parts they contained pink blood. The substance of the brain was firm and bloodless. The ventricles contained a small quantity of serum. The cerebellum was equally exsanguine, but otherwise normal. The spinal canal was not permitted to be opened.

The right pleural sac contained about a quart of clear yellow serum; the left a smaller quantity. The lungs presented a pale blue and pink colour on the surface; posteriorly they were œdematous. In other respects they were healthy. The mucous membrane of the bronchi was pale. The pericardium contained a small quantity of clear serum. The heart was rather large; the right ventricle was filled with liquid blood, the left contained a fibrous coagulum. The endocardium was pale. The muscular structure firm, and of a pink colour. The liver, of a natural form and consistency, contained but a small quantity of thin light-coloured blood. The biliary ducts were rendered very distinct from their being, as was also the gall-bladder, filled with thin greenish-black bile. The spleen was small, healthy in structure, and contained a considerable quantity of thin light-coloured blood. The pancreas was firm and natural. The kidneys were of the ordinary size, very firm and pale; the blood they contained was thin and light-coloured. The blood in the right kidney was, however, somewhat redder than that in the left. The bladder was empty, and its mucous membrane pale. The stomach presented its normal size and shape; its mucous membrane was pale, its fundus somewhat rough and covered with a great quantity of tough mucus; on the lesser curvature was a spot half an inch in diameter, of a pink colour, presenting rays converging to the centre.* The mucous coat was healthy.

* I do not consider that we should regard as cicatrices of former ulcers the appearances generally termed cicatrices of the mucous membrane, which consist of fine convergent radii. On the contrary, these should be considered to be incipient ulcerations. The former opinion has been founded on the apparent similarity of the cicatrices of the stomach with those of the skin, but cicatrices in the mucous membrane of the stomach (if ulcers on a mucous membrane can cicatrize in the same manner as ulcers on the skin) do not present these appearances, as may be seen by comparing them with healed typhoid or phthisical ulcers. Moreover, the above opinion is not based on observation, having originated entirely in the celebrated case of Beclard, who believed that he suffered from an

The jejunum and ileum were pink, but not injected with blood. The Peyerian glands were distinct, but not prominent. The mucous membrane of the large intestine was in a natural state, with the exception of several pink spots. The fæces were dark-coloured. The hymen was very distinctly entire. The orifice of the vagina just permitted the insertion of a finger. Its mucous membrane was pale, and the rugæ prominent. The labia minora were elongated, cedematous, and projecting beyond the labia majora. The substance of the uterus was firm. The os uteri was oblong. The cavity of the uterus contained a small quantity of fluid and coagulated blood. The left ovary contained several hydatid-like bodies, and one single radiated body. The mucous membrane of the left fallopian tube was pale, and could be easily scraped off. The right ovary contained, besides several hydatid-like bodies, two small yellow radiated bodies, about one line in circumference. On its anterior surface, not far from its external extremity, there was detected a minute orifice; this led into a small cavity about the size of a pea; its parietes were of a yellow colour, and it contained a small quantity of reddish fluid blood. In the middle of the right fallopian tube there was observed a small quantity of a white soft membranaceous substance. Its mucous membrane was slightly thickened.

It may be objected to the above-mentioned supposition of the discharge of an ovum from the ovary at each menstruation, that post-mortem examinations have not discovered a series of corpora lutea differing in size and development, corresponding to previous

ulcer in the stomach, and in whom after death such a cicatrix (?) was found. Beclard's case, however, when closely examined, presents symptoms which much more closely resemble those of an incipient ulcer than of one that had progressed so far as to have left a cicatrix. Finally, the co-existence of ulcers and cicatrices in the same stomach are further arguments against the previous opinion.

Ulcers in the stomach are probably formed in this way:—the mucous membrane gives way at some point, the subjacent areolar tissue is probably condensed, and by the peristaltic action of the muscular coat the edges of the ruptured membrane are further separated from each other, the lesion at the same time extending deeper. The subsequent changes, *e. g.* the adhesion to adjacent parts, &c., are readily accounted for; but the pathogenetic question, why the disease so frequently attacks the lesser arch, remains hitherto unanswered.

menstrual periods. This objection suggested itself to me on reading Bischoff's Treatise. The first person who brought it forward was H. Meckel, who also confirmed the correctness of the statement of Ritchie, Paterson, and Warwick, that the formation of a decidua is quite independent of fecundation, and is coincident with the maturation of a Graafian vesicle. Meckel founds his objection on the chronology of the corpus luteum. In woman, the Graafian vesicle, when ripe for bursting, has generally attained a diameter of from six to eight lines. These are also the dimensions of the corpus luteum subsequently formed. Vesicles smaller than this Meckel considers immature. At the end of nine months the size of the corpus luteum is only from four to two and a half lines; this was observed by Meckel in four women who died of puerperal fever soon after delivery. If, then, an ovum be detached at every menstruation, a link, or a series, between these two sizes should have been found; such was not the case: indeed, the older corpora lutea which were found, besides the more recent, had diameters only of from half to two lines. Hence, Meckel inferred that the emission of ova from the ovary, and the formation of corpora lutea, do not take place at periods of four weeks, but at longer intervals,—perhaps from nine to twelve months; peculiarities of constitution being at the same time taken into consideration.

The observations upon which Meckel founded his conclusions appear to me to be far from conclusive. In the first place, with regard to the size of the mature vesicle, or of the fresh corpus luteum, his statements are founded partly on his own observations, partly upon those of Weber and Bischoff. Weber found a corpus luteum measuring eight lines long, and five broad, in a girl who had been *in coitu* seven days before her death. The time of the last menstruation was not stated. Bischoff observed a corpus luteum twenty-one days old, having a diameter of eight lines. Now in these two cases the dimensions given are alike, although their ages differ, or are at least imperfectly recorded. The same is the case with the six instances which Meckel has himself observed. In the first a mature vesicle was found, with a diameter of eight lines, in a woman thirty-four years of age, who had not men-

struated for three months. In the second, a vesicle eight lines in length and five in breadth was found in the ovary of a woman fifty-one years of age, who had menstruated fourteen days before she died. In the third case, an ovum of the size of two lines was found in the uterus of a woman thirty years of age. Here menstruation was not noted; nevertheless, he believes that detachment had taken place from fourteen to twenty days before death. In the right ovary a corpus luteum was discovered having a measurement of eight lines in length and five in width. The fourth case was that of a girl twenty-two years of age, whose menstruation had not been noted, in whom a corpus luteum was observed between six and seven lines in length, and two and a half in thickness. In the fifth case, a corpus luteum seven lines in length and three in breadth was discovered in the ovary of a woman twenty-three years of age, who was said to have menstruated two days before her death, but who, from the state of the uterus, it is most probable had miscarried. Finally, the sixth case was that of a woman thirty-six years of age, who had menstruated three weeks before she died, and slightly also on the day preceding her death; in this case a Graafian vesicle having a diameter of three and a half lines was observed. I shall not here dwell upon the very different anatomical characters of the corpora lutea here mentioned; I will only direct attention to their different or imperfectly stated ages; notwithstanding which, Meckel has brought them together as representations of fully developed corpora lutea.

Meckel's arguments seem still weaker, if it be borne in mind, that of all the above mentioned cases two only presented old corpora lutea, besides mature vesicles. Thus, his first observation was that of a woman who had not menstruated for three months, in whom a mature Graafian vesicle eight lines in diameter, and six old corpora lutea, were found. In his sixth instance also, besides a Graafian vesicle of three and a half lines in diameter there were found eight old corpora lutea. These ancient corpora lutea are generally stated to vary in size from half to three lines, but no mention is made of their anatomical structure, or of the time whence they might possibly have dated.

Besides, I doubt whether we can

justly compare the corpora lutea of pregnant with those in non-pregnant women; for it is, as Meckel himself admits, very probable that they are differently constituted under these two different conditions, so that their production is slower in pregnancy than otherwise. Meckel also allows that the changes occurring in corpora lutea during the first three or four months are unknown to himself. Even among the older corpora lutea we should look for a certain concatenation according as they originate from successive menstruations, with an interval of four weeks between each, or from different pregnancies having variations in their ages of from nine to twelve months or more. Meckel, however, has shown no such gradation. It is perfectly well known that in the same ovary there may be found several old corpora lutea of precisely the same size; from which circumstance it might be supposed that they were of the same age, had we not sufficient reason to believe that the shrinking of the corpora lutea of pregnant women takes place much more rapidly during the first four weeks than subsequently, and that after an uncertain time it becomes impossible to determine the dates of different corpora lutea. Did not this rapid shrinking take place to a greater extent in the earlier weeks, fresh and large corpora lutea would more frequently be met with in post-mortem examinations. Moreover, the conclusion may as reasonably be drawn from the two above mentioned cases, and also from the other observations by Meckel, that the detachment of the ovum has nothing to do with menstruation, but takes place independently of that function; a conclusion the probability of which scarcely any one will admit, considering the amount of evidence which is opposed to it, and which will be afterwards mentioned.

With still more justice may the objection be urged against Bischoff's theory, that the number of old corpora lutea is so small, and so open to variation.* As women generally menstruate thir-

* The largest number of distinct corpora lutea (besides various coloured deposits) in which a regular gradation as from successive menstruations could be discerned, was observed by myself in both ovaries of a young woman twenty-one years of age, who had menstruated shortly before death, which took place from poisoning. She had never been pregnant, but her virginity was a matter of doubt.

teen times a year, thirteen corpora lutea should be found in the ovaries of girls who have menstruated one year; but this number will scarcely ever be found even in older women. Moreover, it is sometimes difficult to recognise any trace of corpora lutea in the black and yellow deposits observed in the ovaries. It is equally difficult to detect the signs of the discharge of ova in the cicatrix-like indentations on the surface of the ovary. We must impute the defect to our imperfect knowledge of the development of the corpus luteum with regard to its external form, and more particularly with reference to the time occupied in these changes.

It is of little use to urge that the number of old corpora is so small, because (according to Meckel) an ovum is discharged only at every ninth or twelfth menstrual period; no interval of this length has been proved to exist, and no signs are observable in women by which we can judge that one menstrual process is more fertile than another: in other words, no season of heat, or rutting period, exists, as in animals, but a woman may conceive at any time of the year, probably every fourth week.

The conclusion from all these considerations is, that we are compelled to confess our ignorance of the chronology of the corpus luteum: therefore in that respect we can adduce no evidence in disproof of Bischoff's opinions.

It is further objected to Bischoff's theory, that it is founded upon a supposed analogy between menstruation and the rutting season in the lower animals. It cannot be denied that these two phenomena appear in different modes; but this is undoubtedly for the greater part owing to the moral constitution of the human being. The frequency of the occurrence of menstruation is perhaps not without its importance in this point of view. As the woman refuses the access of man during the flow of the menses, so the brute will not allow of copulation during the first days of heat, so long as swelling of the external parts would render sexual congress painful: such is the case with the dog, the goat, and the agouti.

It has also been especially objected that the rut appears at certain times only, once or more, during the year, whereas woman may conceive at any time. This objection is without founda-

tion. We only know, as regards animals in their wild state, that the rut occurs once, or, in the smaller mammiferae, returns several times a year, according to the seasons, or to the duration of pregnancy. Nature takes care that it should be satisfied, so that a regular return of the rut after a shorter or longer interval, in the case of the first union of the sexes, being without effect, remains unknown to us. The same is the case with our domestic animals, in whom this state is concealed or changed for economical reasons. We know, however, that in the cow the rut returns every fourth week (Kahleis), or every nineteenth or twentieth day (Numann), if pregnancy have not occurred after the first coitus. The rut of sheep happens every fourteenth day from September to December (Kuhlemann); that of the buffalo and zebra, every month; that of monkeys, every twentieth or thirtieth day (F. Cuvier); that of the pig, every fifteenth or eighteenth day, when not impregnated. The rut of the mare occurs every month, sometimes even after impregnation (Greve). The bitch generally whelps twice a year, and its period of gestation is ten weeks; no decided interval of rutting has been observed. Culture produces changes in the nature of animals, so that the period of rut becomes uncertain. Thus cows may calve all the year round, and sheep may be made to lamb twice a year, or three times in two years. Something similar occurs with regard to domestic poultry: thus, the wild pigeon lays its eggs only once a year, whereas the domestic pigeon lays eggs ten times a year. From the instances here mentioned it may be seen that the rut may occur as often as the menstrual discharge; and therefore that, with regard to the frequency of the phenomena, there is no reason to consider menstruation as different from rut.

Of still less importance is the objection drawn from the predominant symptoms of menstruation—viz., the discharge of blood; for the same has been observed in several animals—*e. g.*, monkeys (Blumenbach, Buffon, F. Cuvier, Meckel, Reugger, Ehrenberg, Breschet, Raciborski, Geoffroy St. Hilaire); the bat (Lesson, Garnot, Geoffroy St. Hilaire); the civet cat (F. Cuvier); the dog, cat, rabbit, cobaya, the pig (F. Cuvier, Pouchet); and the

cow (Kahleis, Numann). That the discharge of blood is not so profuse as in woman, undoubtedly depends upon the fact that the uterus of these animals is membranous: for the same reason, the discharge of blood in the monkey is more profuse than in the other animals. It is further contended (in this point many see a difference from the discharge that occurs in women) that the sanguineous discharge observed in these animals proceeds only from the vagina and external parts, not from the uterus. This is not the fact. Kahleis has observed a secretion of blood from the whole interior of the uterus of the cow. Pouchet has found the uterus of the pig, cat, rabbit, and cobaya, swollen, and intensely injected; whereas the vagina was of a pale pink colour, and not participating in the state of congestion of other parts. A periodical secretion of blood, therefore, is not at all rare in the lower animals, and it will undoubtedly, in time to come, be traced in still more numerous instances. In most animals there is perhaps little more to be observed than congestion of the genitals, accompanied with increased secretion of mucus; and, indeed, it may be remarked that a discharge of blood does not seem to be the essential phenomenon, for the reason that the discharge of blood in woman is mixed with a large quantity of mucus and epithelial cells, which do not proceed from the vagina alone, but also from the uterus, the mucous coat of which is thickened, and where the formation of a decidua commences, to be subsequently dispersed by the menstrual discharge, or, in the event of pregnancy, to be further developed.

With regard to the menstrual function, the uterus may be considered to be a blood-secreting organ, and corpora lutea may be formed even if the uterus be removed, as Bischoff has proved by experiments on rabbits. That the uterus does not contain the real cause of menstruation is seen from a case related by Moss, in which, notwithstanding the extirpation of the uterus, the menses continued to flow from the vagina. The determining point of the whole menstrual function is the ovary: when these organs are removed both rut and menstruation cease. The rut does not return in animals whose ovaries have been removed, the same being the case with regard to menstua-

tion in women. Thus Pott reports a case of a woman, twenty-three years of age, who suffered from an inguinal hernia which included both ovaria: she was otherwise healthy, had large breasts, and menstruated regularly. Both the ovaria were removed; the patient recovered, but she grew thin, her breasts shrank, and menstruation did not again occur. Another girl, in whom the uterus was wanting, but the ovaries were probably sound, experienced the periodical menstrual molimen without discharge of blood. Robert also states that the catamenia disappear in women living in Central Asia the ovaries of whom have been excised. I observed the case of a widow in Frederick's Hospital, of a healthy constitution, who died at the age of twenty-two years, and who had never menstruated: whether she had ever experienced the menstrual molimen I unfortunately had not noticed. The uterus was of the size and form of that of a child fourteen years of age; its parietes were scarcely two lines thick, its cavity contained a sanguinolent mucus; the tubes, as well as the ovaries, were small; the latter were rather loaded with blood, and contained no Graafian vesicles. The urinary bladder, kidneys, and external organs of generation, were in a natural state.

Although this last case is not entirely conclusive, nevertheless the part the ovary performs in the function of menstruation is evident from the preceding observations. It is even probable that the menstrual discharge itself is determined by the ovary; so that it is closely connected with the hæmorrhage that attends the detachment of the ovum from the ovary, and with the filling of the emptied Graafian vesicles by blood from rupture of the vessels. The following case proves that this hæmorrhage may be considerable:—

M. H., forty-one years of age, was brought to the hospital on the 23d of June, 1845, having been ill nine days. She died on the 6th of August, from a cerebral tumour and softening of the brain. She had menstruated before she was brought to the hospital: she menstruated on the 8th of July, and again also shortly before she died. On examination after death, the uterus was found to be enlarged: its cervix contained a cyst the size of a nut, filled with albuminous fluid. In one ovary a coagulum of blood was found. Both

tubes were distended by a considerable quantity of liquid blood.

From what has now been advanced, it may be seen that the dissimilarity of menstruation and rut cannot be proved from the difference in the frequency of their occurrence, nor from the characters of the attendant discharge of blood; but that, on the contrary, with reference to the points here mentioned, and with regard to the influence of the ovary in menstruation and rut, the greatest possible similarity exists between woman and the lower animals, their specific differences being put aside. Moreover, all agree that a woman is most sure to conceive immediately after menstruation.

If, therefore, it be certain that every rut is attended by the bursting of a Graafian vesicle and the detachment of an ovum, and if the rut be completely analogous to menstruation, it can scarcely be called jumping to a conclusion to say that, at every menstruation, an ovum is also liberated. Yet it must be acknowledged that we have (as already observed in the beginning of this paper) only arrived by direct observation at the fact, that when death occurred soon after menstruation a recent corpus luteum has been discovered when looked for.

It is remarkable that, notwithstanding the infinitely frequent repetition of the act, it has not hitherto been possible to point out any fixed term for the occurrence of conception—a point of the greatest importance to mankind.

[To be continued.]

FRACTURE OF THE CRANIUM WITHOUT SUBSEQUENT EVIL EFFECTS.

DR. STUTE relates the case of a man who, having fallen on his head, sustained a fracture of the skull, with the detachment of a fragment of bone an inch and a half by three quarters in its dimensions, without any interruption to the performance of his bodily or mental functions during the whole process of reparation. The only symptom of disorder was sleeplessness, which occurred about the eighth day, and was relieved by scarification and a hot foot-bath. In six weeks the injury was perfectly repaired; the separated bone had become firmly re-united, and would bear considerable pressure: the only remaining trace of the fracture was a slight groove.—*Casper's Wochenschrift*, 1851. x

MEDICAL GAZETTE.

FRIDAY, OCTOBER 10, 1851.

IN the numerous schemes which have been proposed for improving the SEWERAGE of London, it has been considered indispensably necessary to make the Thames the recipient of the excreta of the whole population. There seemed to be no other method of disposing of the many thousands of tons of sewage which must annually find a vent from the lanes, streets, and squares, of the great metropolis. The Commissioners of Sewers have on their part taken the matter in an easy spirit, and the public have resigned themselves to what appeared to be an inevitable necessity. The Thames is a tidal river; by its low position, and the volume of its waters, it is the most convenient receptacle of the diurnal filth of London; and there is no cheaper or more practicable way of disposing of the sewage. Such appear to be the reasons which have almost reconciled Londoners to a highly wasteful and unhealthy practice; and the only suggestion as an improvement, has been the proposition to convey the sewage to a point nearer to the sea, and discharge it into the river at periods which would prevent its reflux to the metropolis.

The evils of the present system are manifold. The sewerage of this great city is so imperfect as to create complaints from all quarters. The contents of our sewers can find their way into the Thames only at or near low water: at other periods, including one-half of the day, the tide itself rushes up the sewers, carrying with it the foul effluvia, and the water acts like a valve to stop the efflux. Thus, then, the banks of the river, and the houses and streets adjoining it, are daily subjected to an

intermitting nuisance of the very worst kind; and the mere imperfection of the system renders the air of our streets and habitations positively injurious to health. On the other hand, the more perfect the drainage, the greater the damage in other respects. It is a matter of absolute necessity that we should procure our supply of water either wholly or in part from a river like the Thames: there is no source which can be compared to it either in abundance or constancy. By the present misdirection of the sewage, we endeavour in every possible way to damage the quality of the water; and one of the strongest weapons, next to the amount of rates, wielded against the London Water Companies, is furnished by the diurnal discharge into the bed of this river, of the sewage of two and a quarter millions of people! It has been taken so much as a matter of course that we are bound to do our best to poison the waters of a noble river, that no one has ever thought of adopting some other and better method of disposing of the sewage: and yet it would surely be more reasonable to turn our attention to this subject rather than reject good water because we have already used our best endeavours to spoil it. Private individuals do not carry the sewage of their houses into ponds or other sources from which they may be supplied with an unlimited quantity of good and wholesome water; and we might fairly question the sanity of a man who, under such circumstances, proposed to abandon the water, and, instead of turning his attention to some better method of disposing of the sewage, sought for a supply at great expense elsewhere.

But the question is one of economy as well as of common sense. It has been long known that sewage-matter possesses highly fertilizing qualities: these have perhaps been in some instances exaggerated by sanguine specu-

lators, but, making due allowance for such exaggerations, it is a demonstrable fact, that, in carrying into the Thames the excreta of a population like that of London, we are yearly wasting an enormous quantity of valuable manure, capable, under a proper system of management, of being applied to all those purposes for which guano and other animal compounds have been of late so extensively used by agriculturists.

We have now before us a pamphlet in which the question of the disposal of the London sewage appears to be solved in a reasonable and satisfactory manner.* The author proposes to construct in a district requiring to be sewered, a tunnel-sewer having such a fall as to prevent the accumulation of filth, and to ensure constant cleansing without the necessity of resorting to the noxious process of flushing. This tunnel-sewer would convey the sewage into a large and deep reservoir, placed at a sufficiently low level, and in a convenient spot. The low-water level necessary to maintain the flow would be preserved by raising the sewage-water by pumps worked by steam. It is proposed to convey the sewage-water, thus raised, into an upper reservoir, where it would be intimately mixed with cream of lime in a certain determined proportion. The effect of this alkali is to remove almost entirely and with great rapidity the foetid effluvia, and to throw down the animal and other suspended matters in a solid and insoluble form. The supernatant water is left clear and colourless, and may be drawn off from the sediment; and, as it now contains only soluble salts, it may be discharged into a river without contaminating its waters. The difficulty of drying the deposit rapidly and

* Observations on the Nature, Properties, and Value of the Patent Solid Sewage Manure; with a Description of Wicksteed's Patent Process for its Manufacture, &c. London: Weale. 1851.

without the aid of heat, has been most ingeniously conquered by placing it in a wire-gauze cylinder, and giving to this a great centrifugal force. It is then packed, and in a state for use as manure. It would be quite out of place here to enter into all the details of Mr. WICKSTEED'S scheme; but it appears to have these advantages over every other plan which has been proposed:—it provides for the immediate and rapid sewerage of a district at all periods,—it prevents the contamination of a river or other sources of water-supply, by removing all noxious animal and vegetable matters,—it provides for a speedy deodorization, separation, and drying of the solid and useful parts of the sewage,—and, lastly, it furnishes to the agriculturist a cheap and useful manure in a concentrated form.

Here, then, we have all the desiderata required for the improvement of the London sewage in preventing the diurnal pollution of the Thames water, and in making a profitable use of materials which, to the detriment of the public health in every sense, we now allow to run to waste. It may probably be objected that the scheme could not be practically carried out, since the reservoirs required in the vicinity of London, would, from their vast size, become a nuisance. The question really is, however, whether we should continue to throw all the excreta into one focus,—the Thames, leaving them there to undergo spontaneous decomposition, or whether we should not rather subdivide the sewage into districts, where the chemical means proposed might be immediately employed for destroying its offensiveness. Whatever objection may exist to this localisation of a part, applies with ten-fold force to the daily discharge of sewage into the bed of the river, and its concentration in the neighbourhood of the bridges.

In a financial point of view, we are informed that this scheme, judging from some experiments, would be found highly profitable. It is calculated that the solid manure which could be obtained annually from the excreta of the London population would amount to 297,755 tons! Let the agriculturist assign what value he pleases to this manure,—a nominal sum per ton would fully justify a trial of a scheme which promises so vast an improvement upon the present system. Enormous sums have been already expended by the Commissioners of Sewers, and yet we are no nearer to that desirable consummation in which the Londoner will be permitted to breathe pure air, and use unsewered water. We shall not believe that this scheme is impracticable, or unadapted to the wants of the metropolis, until it has had a fair trial.

THE disastrous termination of the original so-called MEDICAL PROTECTION SOCIETY had almost convinced the profession that the success of such a society was an impossibility,—its very existence impracticable. The directors of the affairs of the present Society have, however, shown that the source of failure was not in the principles upon which an institution of this kind should be based, but in the defects or faults attending the carrying out of these principles. The first year of the renovated Society has terminated in the most gratifying confirmation of the reliance of its directors on the goodness of their cause. With a determination highly creditable to them, they faced the difficulties that beset their path. With a well-founded confidence in the true strength of the objects on which they were engaged, they have encountered the opposition of enemies, and have combated the fears of lukewarm friends, until within a year those difficulties have vanished, and

they have convinced alike opponents as well as friends that the common interests of the profession cannot fail to be promoted by the success of this institution.

Having succeeded in restoring confidence and respect to the name of the Medical Protection Society, its managers have come forward with great energy and earnestness to urge upon the members of the profession the claims of its destitute aged, its widows and its orphans. The appeal cannot be made in vain to a class of men who may, without boasting, claim for themselves pre-eminently the character of benevolence. We feel assured that those who have ever been ready to help others, will not fail to lend their aid to the good cause.

We would just add, that although few who become members of the Medical Protection Society may avail themselves of its machinery, and although still fewer of those who contribute toward the establishment of the Benevolent College may require its shelter in old age, or leave their widows and orphans to its care, yet the sacred obligations of charity should induce all among us to illustrate practically the great moral maxim of doing unto others as we would they should do unto us. On this ground we trust that we may with confidence submit the useful and charitable objects of this institution to the attention of the medical profession.

WE learn from a New Zealand paper published at Myddleton, the chief town of the new Canterbury settlement, that before a medical man can be permitted to practise medicine and surgery in that colony, he must submit his credentials to the inspection of the Governor. The diploma of a recognised British College, or the license of the Apothecaries'

Company, is regarded as a sufficient qualification, and the holder thereof is forthwith authorised to practise his profession within the limits of the settlement.

It might seem, at first sight, to be a somewhat arbitrary rule, that a professional man, having undergone all the requisite studies and examinations in the mother country, should be subjected to the control of any subsequent restrictions in the Colonies; but, upon slight reflection, it will be apparent that such a check upon free-trade in physic must operate as a most salutary regulation in a new colony, and constitute the only, at the same time the most powerful safeguard for the lives of the settlers against the depredations of the nefarious dealers in "systems" of heretical medicine. It would be well if the same regulation existed in all our colonial possessions. This judicious regulation, however, would be more efficient if the examining bodies in England would satisfy themselves that they are not sanctioning the spread of dangerous heresies when conferring their degrees.

It is universally admitted, that an extended acquaintance with the highest class of professional literature, both ancient and modern, must exert a beneficial influence upon the character and standing of medical men. We therefore feel that we are promoting their best interests when we direct attention to those Societies, which, by the combination of many members, are enabled to afford such opportunities for acquaintance with classical medical literature, as are otherwise within the reach of a very few.

Foremost among these is the SYDENHAM SOCIETY, which has now reached the ninth year of its existence. It comprises a very large number of members, the majority of whom expressed their

satisfaction with the arrangements made by the Council. The members of the latter body have an undoubtedly difficult task to perform in the judicious selection of works suited to the wishes of the several classes of subscribers, with the due observance of a wise economy. We may, however, congratulate the Council on the success that has attended their labours, and upon the integrity and impartiality with which they have encountered and surmounted the difficulties that have presented themselves. At the same time we would urge upon the profession to give the most efficient aid by adding their names to the list of members.

Taking the past as a guarantee for the future, we confidently look forward to incalculable benefits yet to be conferred by this Society. In diffusing sound medical literature among its members, it cannot fail to benefit medical science and improve the status of medical practitioners.*

WE learn from good authority that the obnoxious order recently issued from the War Office respecting the branding of deserters by Army Medical Officers has been, for the present, suspended. It is highly probable, after the strong opposition which it has met with from all quarters, that it will not be carried into effect.

GENTLEMEN ADMITTED LICENTIATES AT THE ROYAL COLLEGE OF PHYSICIANS.

At the quarterly meeting of the Comitia Majora, held on Tuesday, Sept. 30, the following gentlemen, having undergone the necessary examinations for diploma, were admitted members of the College:—Dr. Habershon, Finsbury Circus; Dr. Barron, St. Thomas-street, Southwark; Dr. Parker, London Hospital: also, Dr. Thornton, Norwich, was admitted an extra-licentiate.

* The Society has issued Unzer and Prochaska on the Nervous System, as its first work for the ninth year.

Reviews.

On Gout: its History, its Causes, and its Cure. By WILLIAM GAIRDNER, M.D. Second Edition. 12mo. pp. 300. London: Churchill. 1851.

THIS essay has already, in its first edition, taken a prominent position among the best medical works of the present day; the second edition, now before us, will maintain that position, and confirm the high estimation in which its predecessor has been held. It is unnecessary to dwell at much length upon the contents of a work so well known; we shall direct our observations principally to an analysis of the additions which the author indicates as having been made, and which are to be found chiefly in the sections on the chemistry and physiology of sanguification in relation to gout.

With reference to the existence of a *materies morbi* in the system, after examining the opinions of Cullen and Stahl, and the opinions of Dr. Holland and Dr. Garrod on the relations of uric acid as a proximate cause of gout, Dr. Gairdner remarks:—

“The result of these considerations is, that I cannot look on the disappearance of urea and uric acid in the urine, and their accumulation in the blood, as anything else than a very frequent symptom and consequence of gout, itself again being the cause of other important phenomena. The kidneys are obviously the principal emunctories of these substances in the healthy state of the system. If their function be arrested, either the suppressed urica and urates must be eliminated through some vicarious channel, or be retained in the current of the blood, in which latter case we observe the most poisonous and even fatal results. This is, indeed, the frequent cause of that general cachectic condition so often seen in gout: hence arise distressing headache, somnolence, and indifference.” (p. 99.)

Further in treating of the relations of urea and uric acid, Dr. Gairdner says:—

“I trust I have convinced my readers, as well as satisfied myself, that in gout we have not merely an increase of urates in the excretions, but an altered relation of the urea and uric acid, and that this change takes place in the early assimilation of the food during the process of respiration.

These facts throw much light on the pathology of the disease; and they are so distinctly applicable to treatment that I trust even those physicians who deprecate the great freedom with which speculations in chemistry have sometimes been used to bolster up fancies in physic, will excuse the length of the details into which I have entered." (p. 107.)

The following remarks having reference to the processes of oxygenation and assimilation are deserving of attention, as counselling caution in the reception of statements with regard to the chemical changes that are alledged to take place in the living organism.

"But the German chemists have not merely represented animal and vegetable albumen as identical; animal albumen and fibrin, though widely different in appearance and physical qualities, are also said to be quite alike in chemical composition. The ease with which the scientific world has acquiesced in these opinions does, indeed, appear still more surprising, when they are not found supported by facts as distinct and positive as the dogmatical language in which they are announced. In scrutinising the analytical tables of Liebig's work, I am surprised to find figures set down on the trustworthy authority of Secherer, Jones, and of Liebig himself, establishing such differences of composition between animal and vegetable albumen, and animal and vegetable fibrin, as not to justify language so emphatic, and certainly to make us pause ere we draw great conclusions from facts so uncertain." (p. 142.)

Dr. Gairdner thus states the leading facts and opinions that he has sought to establish, as expressive of the chemical changes concerned in the metamorphoses of albumen, fibrin, gelatin, &c.

"It has been proved I think beyond the possibility of cavil or doubt, that, in the act of respiration, and by a process of oxygenation, the amorphous albumen is converted into plastic fibrin, adapted to the uses of the system and the softer muscular tissues. The fibrin is again, I imagine, by the removal of a portion of its carbon, by a further process of oxygenation, and by the addition of some atoms of nitrogen, raised to the condition of gelatin, which is instantly carried to the organs for whose nutrition it is destined. The fibrin supplies the softer and more perishable muscular substance. The highly organised gelatin nourishes the organs and containing vessels where elasticity and ductility must be united to great resistance and

strength. By a still greater development of the same processes, the more elastic chondrin is added to constitute the cartilages of the body. These functions of decarbonisation and oxygenation best account, in my mind, for the appearance of carbonic acid, and disappearance of oxygen in respiration." (p. 168.)

The author dwells with emphasis upon the function of respiration as a process of nutrition, its importance to health, the offices of the red globules and their pathological states, the excess of albuminous principles, and sums up this part of his work in the following words:—

"I have now gone through the whole of this subject of the chemical and physical constitution of the blood, with a view to prove that rest and repletion lead necessarily to accumulation of globules; that aeration is the source of fibrin; that by exercise the fibrin is carried forward to the tissues; that exercise, air, and moderation in diet conjoined, constitutional disease, and particularly gout, may be avoided and cured; that without them it is vain to hope for anything more than a respite from suffering for a greater or shorter period, or even only a suspension of the most acute symptoms of disease. These observations are so consonant with the observations of all men, learned and unlearned, of every age and of every country, that they will, I feel persuaded, meet with ready belief" (p. 183).

The views, of which we have only stated a few points, entertained by Dr. Gairdner on the chemistry and physiology of sanguification are essentially scientific, at the same time they are of a directly practical tendency. Their results are traceable in the pathology of the disease offered by the author, who traces it to an increased pressure of the blood from its accumulation in the great veins, and an altered state of that fluid, of which an increase of globulin and diminution of fibrin are the most remarkable circumstances, leading to the perversion of the nutrient principles of the blood, and the formation of uric acid instead of urea. All these results, according to the author, depend on too copious an absorption of nourishment, on defective respiration, on deficient innervation, and on more or less suppression of the healthy evacuations from the liver, kidneys, and skin.

The chief features of Dr. Gairdner's

therapeutical directions are small blood-lettings, and the use of moderate purgation. Colchicum, as it has been commonly used, the author strongly reprobates; its action he considers to be that of a narcotic on the nervous system. But, as already observed, we do not feel called upon at the present time to do more than recommend this treatise to the careful study of all practitioners.

Mémoires sur la Digitaline, par MM. HOMOLLE et QUEVENNE. *Rapports faits à l'Académie Nationale de Médecine*, le 8 Janvier 1850, et le 4 Février 1851. Commissaires, MM. RAYER, SOUBEIRAN et BOUILLAUD (Rapporteur).

Memoirs on Digitaline, presented to the Academy of Medicine in Paris, by MESSRS. HOMOLLE and QUEVENNE; and the Reports thereon by MESSRS. RAYER, SOUBEIRAN, and BOUILLAUD (Reporter). Pamphlet, 8vo. pp. 55. Paris: Martinet. 1851.

MM. HOMOLLE and QUEVENNE having succeeded in extracting the active principle of digitalis, have laid before the Academy of Medicine a statement of their experiments on *digitaline*, and an account of other substances with which this active principle exists in combination in the plant, as also of the processes by which they are separated. These, which comprise the first part of the memoir, are followed by the results of investigations on the physiological and therapeutical actions of this new principle. The authors state that *digitaline* is the sole active principle of digitalis, and that it has all the properties which the plant itself is known to possess, viz. an emetico-cathartic action when taken in large doses, a diuretic action, and a special and peculiar effect upon the circulation. Lastly, it produces cerebral irritation, vertigo, headache, sleeplessness, and delirium. The reporters, in placing these points before the Academy, first submit a summary of the various opinions that have been held upon the action of digitalis, and an analysis of the experiments performed by MM. Homolle and Quevenne on the medicinal properties of digitaline. From these we learn that it possesses all the qualities of the plant, and it will, we doubt not, be generally employed before long, as being less

liable to variation or change in its constitution by keeping, like the ordinary preparations of digitalis. These alterations by time have been the cause, in some measure, of the various degrees of value attached to this drug.

We quote the following fundamental propositions, in which MM. Homolle and Quevenne sum up their researches:—

1. Digitaline possesses all the therapeutical properties of digitalis.

2. Digitaline exerts a controlling influence over the circulation, and moderates the movements of the blood. This action, essential and nearly constant, may be obtained by very small doses: *e. g.* for adults two to five milligrammes ($= \frac{1}{32}$ nd to $\frac{1}{12}$ th grain) in the twenty-four hours.

3. In a dose exceeding four or five milligrammes ($\frac{1}{12}$ th Eng. grain) in the twenty-four hours, digitaline exerts an emeto-cathartic action, which is sometimes suddenly, at others slowly manifested.

4. Digitaline has a poisonous action when taken in a large dose. This effect has been shown by injecting a centigramme (about $\frac{1}{8}$ th of a grain) into the veins of a dog. But when taken into the stomach it does not appear to have so powerful an action as is usually supposed, the excess of the medicine being thrown off.

5. Digitaline should be preferred to the powdered leaf, the best ordinary preparation of the plant. This principle is more readily administered, is more certain in its action, and is more constant in its effects.

6. Digitaline exerts a diuretic action, and produces an excitement of the nervous system. These effects, however, are somewhat uncertain.

7. Digitaline has also an effect upon the eyes when applied to the conjunctivæ, producing some slight pain and a coloured halo in vision.

Applied to the denuded skin, it causes painful inflammatory swelling: hence it is excluded from employment by the endermic method.

The reporters confirm all the observations of the authors. We probably, therefore, have here an important therapeutical agent added to our *materia medica*. Should it be found ultimately that greater uniformity of action is possessed by the alkaloid than by any of the common preparations of the plant, the uncertainty and danger that

at present attend the administration of digitalis will be removed.

Translation of the Pharmacopœia of the Royal College of Physicians of London; with notes and illustrations. By RICHARD PHILLIPS, F.R.S. L. and E. 8vo. pp. 567. London: Highley. 1851.

WE have already published several notices of works having reference to the new edition of the London Pharmacopœia. The translation now before us would have appeared some time since, but for the unexpected death of the author. No one was more competent than the late Mr. Phillips to undertake the task of giving an English dress to the *Pharmacopœia Londinensis*; and we learn from the preface that this work had nearly been brought to a completion when death interrupted him in his labours. Its completion, from the notes of Mr. Phillips, was entrusted to Mr. J. D. Smith, a gentleman favourably known for his acquisitions in chemical science. As one of the old pupils of the translator, Mr. Smith was in other respects well qualified to perform this duty; and the volume before us has been ably edited on the plan of the author, slightly modified from that of former editions.

We have already entered so fully into the changes introduced into the new Pharmacopœia, that we consider it unnecessary to give a detailed analysis of the contents of the volume. We shall merely remark that, in an authentic form, it presents, in the way of comments, and explanatory notes of processes and formulæ, all that can be desired by students or practitioners.

Medical Portraits—Sir B. C. Brodie. 1851.

THIS is a lithographic drawing from a bust of this excellent surgeon. The drawing is well executed; we cannot, however, recognise the likeness to the worthy baronet whom it is intended to represent. We prefer a rough copy of the living man to the most accurate delineation of a face of stone.

Proceedings of Societies.

NEWCASTLE AND GATESHEAD PATHOLOGICAL SOCIETY.

June 1851.

Chronic Rheumatism; comprising an analysis of 143 cases, 100 of which were treated by the Nitrate of Potash in large doses, and the remaining 43 by Colchicum. By JOHN CARGILL, M.D.

ON the 11th of April, 1851, I read to the Society a brief statement, containing a few only of the results of the above analysis, contenting myself with pointing out the respective value of the two modes of treatment, without entering into the theoretical views I entertain respecting its nature. The present paper enumerates all the facts observed, and the inferences I conceive to flow from them, together with certain general principles which I think may be legitimately deduced both as to the treatment and pathology of rheumatism.

These cases have been treated during a period of nearly six years, *i. e.* between 1842 and 1848, and they have been nearly all in-patients of this Hospital, so that I have had them constantly under my own eye, the few not so situated having been out-patients.

I have compared the cases together under as equal circumstances as possible, and have endeavoured to attain as much accuracy as I could by carefully registering them at the time; this register comprising the following features:—Age, sex, duration of malady previous to admission, seat of pains, dose and combination of remedy, time of its employment, result, disturbing or other effects on the system, temperament of the patient, and concomitant treatment.

I shall first consider these points in reference to what was observed in the colchicum patients, and then in those treated by the nitrate of potash, and shall conclude by recording certain deductions, which I think have unfolded themselves from the various facts, and likewise mention the views I entertain of the pathology and intimate nature of rheumatism.

Of the 43 cases treated by colchicum, 14 only were cured, or about one-third, and the average duration of the treatment was 15½ days; the average duration of the malady before admission being 73 days. In addition to the 14 who recovered entirely, there were 12 relieved, whilst 12 remained no better. In 1 the complaint appeared to be worse, and in the remaining 4, circumstances arose which prevented any positive conclusions from being arrived at.

Dose and combination of the Colchicum.—

In rather more than half of those cured, that result was effected by the Vinum Seminum Còlehiei in the dose of from 15 to 30 drops thrice a day, with a little Magnesia and Sp. Etheris Nitrici. In a very few instances 10 grains of Dover's powder were given a few times at bed-time. In 6 out of the 43, the colchicum was given in powder in 4 grain doses thrice a day; in one case it was given in 6 grain doses thrice a day, and in one case in 2 grain doses thrice a day, all combined with Pulvis Cretæ. In all but the last named it produced vomiting, griping, and diarrhœa in two or three days time, and had to be left off for the Vinum with magnesia. Of this latter combination, the dose before mentioned, viz., ℥xv. to xxx. with 15 grains of Magnesia, and ʒss. of Sp. Eth. Nit. was the most effectual, and the best borne. When the Vinum was given by itself it seemed slower in its curative effect, and when given in ʒjss. doses or ʒj. doses thrice a day, either alone or combined (a measure in a few instances adopted), it invariably had to be left off, from its producing very speedily its usual severe physiological effects, with great depression, and often cramps, the disease remaining at the same time unaffected. I should add, that these results followed even when the above doses were attained to very gradually.

Concomitant treatment.—In 17 out of the 43 cases the warm bath thrice a week was used, and in 14 out of this number manifest relief was obtained. In 10 cases out of the 43, Dover's powder was given in from 10 to 15 grains each night, and in 6 of these cases it was followed by beneficial effects. Cupping was occasionally used, and generally with benefit. Bleeding from the arm was scarcely ever practised, and calomel, Epsom salts, blue pill or coloeynth, were used as preliminaries, if constipation existed. As to the seat of the disease, it was in the several joints and muscles. In four cases wherein the rheumatism existed along with sciatica as its chief feature, the treatment by colchicum was fruitless.

II.—*Chronic Rheumatism treated by Nitrate of Potash in large doses.*

Of the 100 cases treated by this method, there were 61 cured, being more than six-tenths of the whole, and the average duration of the treatment was $13\frac{3}{4}$ days. In addition to the 61 cured, there were 20 who experienced great relief, but were not entirely cured at the time of dismissal; there were 5 who experienced very slight benefit only, 3 received no benefit, and 3 got worse. In the remaining 8 cases no positive conclusions could be arrived at.

Dose and combination of the remedy.—

The usual dose to begin with was ʒij. thrice a day in barley water; this was adhered to in many cases throughout, but in a large number it was increased to ʒj., ʒiss., ʒij., thrice a day, and in one case ʒiij. every four hours was begun with and continued without intermission for 12 days, without the smallest inconvenience to the patient, who was cured in that period. This was a bad case of $2\frac{1}{2}$ years' previous duration. The dose was often begun with and continued at ʒj., and with no disagreeable effect; sometimes ʒj. thrice daily, and sometimes ʒj. every four hours consecutively.

Being desirous of ascertaining whether the duration of the malady might be shortened, or good in other ways obtained by combining the Nitre with Sp. Nit. Antim. Tart. and Tinct. Opii, I adopted this in a considerable number of cases, and the result has shown me that no advantage is derivable from this practice. The dose of Sp. of Nitre was generally from ℥xv. to ʒss. or more; that of the Vin. Antim. ℥xv., and that of the Tinct. Opii. ℥v. to each dose of the Pot. Nit. Sweating and diuresis were equally produced by the Nitre alone as when given in the above combination. Of the three, the Tr. Opii alone appeared useful by frequently assuaging the severe pain.

Disturbing effects.—It is of great importance to remark that this remedy was invariably administered in a large quantity of warm barley-water—not less than ʒviij. to each dose. When given in the above large doses, without a diluent and demulcent like barley-water, it produces intense griping, with pallor of the countenance and cold perspiration, the pulse and heart's action flagging and coming down, and the greatest anxiety being experienced. This is followed by a dry red tongue, with enlarged papillæ and much thirst. This I had an opportunity of seeing to an intense degree in one case wherein the nitrate of potash in those doses had been administered several times without any diluent by the oversight of a nurse; she gave it in ʒiss. of plain water. I was on the point of applying numerous leeches to the epigastrium, fearing that gastritis was coming on, when the symptoms at last yielded to diluents and warm external applications, leaving no appreciable effects behind.

I shall now mention what were the *disturbing effects on the system* observed to be produced by large doses of nitrate of potash in cases *where it had been duly taken* with barley-water, but had not been well borne by the system. Those effects were seldom manifested, the medicine, when properly diluted, seeming to act mildly and efficiently. When it is not tolerated, how-

ever, its effects are primarily on the nervous system. They are these:—General debility of the limbs, especially the lower extremities, and the knees, too, particularly complained of. I have seen this carried to an extent which made the patients believe that they were seized with general paralysis; the whole body seemed to be made of wood, and for some hours it was impossible for them to rise from their seat or to move hand or foot. To this were conjoined general tremblings, and the speech was affected; occasionally the names of things were forgotten or mistaken: there was also giddiness, and a painful rushing sound in the ears. I never in these rare instances saw any distortion of the features, and the symptoms subsided in a few hours by diuretics or copious perspiration. In the event of such results occurring, the chief remedies I should recommend would be hot diluents and hot blankets. The subjects of them will be found generally of the purely *nervous temperament*, especially if associated with feeble power of the constitution. When the sanguine or bilious temperament is combined with the nervous, the remedy is better borne and may be pushed farther; and it consists with my observation that the bilious lymphatic temperament, with its firm, harsh, muscular development, is the one in which this plan of treatment the oftenest succeeds and may be used the most fearlessly, as it is the one on which chronic rheumatism, when once established, displays itself with perhaps the greatest relentlessness.

The *concomitant treatment* was simple, and most generally dispensed with altogether (with a view to ascertain more accurately the value of the nitrate of potash itself), except in cases of severe complication, in which the need for additional means, chiefly local, was urgent. It consisted in occasional warm baths and vapour baths. Cupping and leeching were had recourse to in such cases as showed a concentration of the disease in particular joints, as evidenced by swelling, redness, and acute pain not shifting its seat. In dull chronic pains localised, occasional blisters were applied, and often with benefit; and, towards the termination of the cases, a liniment of ammonia and turpentine was frequently useful in restoring the natural suppleness of the parts. When the pains were so great as to prevent sleep, and to harass the patient in an unusual manner, a draught of muriate of morphia, with solution of acetate of ammonia and water, was given at bed-time. The bowels were kept free by means of occasional light cathartics; and the treatment was generally commenced by giving a dose of calo-

mel and colocynth, followed by a draught of infusion of senna with sulphate of magnesia.

The *diet* enjoined was nutritious, being the ordinary diet of the house—viz. meat, once a day, milk, rice, broth. In such cases as presented symptoms verging on the acute, low diet was prescribed—such as milk, tea, sago, &c. In all old-standing chronic cases generous diet was found the best, accompanied even by ale, porter, wine, or gin.

In the above 100 cases the *duration of the malady previous to admission* was widely different,—so much so, that no analytic average could be struck with a view to results that would not have a tendency rather to conduce to error than to elucidate truth. I may state in general terms that the length of time in these cases previous to coming under the above treatment was from seven days to ten years, whilst there were a few who could remember no period of their lives in which they had not been victims, more or less, to the complaint. Two months, five years, six years, six months, one year, were the most common periods cited; and it should be remarked that nearly all the cases were of an unusually severe character, and had been under all manner of practitioners; for many, despairing of a cure otherwise, had committed themselves to the tender mercies of unprincipled quacks, from whose fiery ordeal they had emerged with the conviction that now nothing but a residence in an infirmary with the reputation of our own could avail to benefit them!

Sex.—It is remarkable that, of the whole 143 patients, 17 only were women, the remaining 126 being men. The average age of the women was $35\frac{2}{3}$, that of the men $37\frac{1}{3}$. From this it appears that, in this part of the country, men are about $8\frac{1}{2}$ times more liable to be affected with chronic rheumatism than women, or for 1 woman attacked with chronic rheumatism there will be between 8 and 9 men. This is in all probability owing to the greater exposure of men to cold and wet; for I have found that in all of these cases the exciting cause, when any could be given, was invariably cold and wet, or sudden transitions from a high temperature to the opposite. On referring to MS. notes of M. Louis' clinical lectures on this subject, taken down by me at the time of their delivery at the Hospital of La Pitié, in 1835, I find his experiments the same as to the exciting cause—invariably exposure to cold air or draughts (*un vent frais*).

The difference as to the *frequency of rheumatism* in France and England seems to be very great. Louis says that, out of 100 cases of all sorts treated by him, he

only found one of rheumatism; and in the Paris Hospitals, during two years, it was rare that rheumatism, whether acute or chronic, ever fell under my observation. That the difference is great among us will appear from the following fact:—On analysing, a good while ago, a number of cases of all sorts, nearly all of them chronic, treated by me in this hospital, embracing a period of five years, and amounting to 959, I found that 86 were cases of chronic rheumatism, being, on an average, 1 in $11\frac{1}{2}$ th of the whole number. From this I think we may infer that climate exercises an immense difference in this disease; and doubtless the same cause is, in regard to all other diseases, more powerful than we are generally aware of. How else can we explain the entire exemption of some countries from certain maladies? In India and Egypt phthisis is unknown.

I will take the opportunity of stating here, that I believe heart affections to be very uncommon associates with chronic rheumatism; nor do I think that this malady is apt to be *followed* by cardiac disease. In the cases above analysed it was constantly found that such of them as showed heart disease, had been preceded by rheumatic fever, and the heart affection could be traced to that period of acute disease. This is in conformity with the opinion now, I believe, generally entertained—viz. that acute rheumatism is very frequently accompanied by endocarditis, and, without very vigorous measures, is apt to be succeeded by permanent disorganisation of the heart. I have seen this hold to the full extent admitted by Dr. Hope, though not perhaps to the degree maintained by Bouillaud. In chronic rheumatism properly so called, heart disease is, in my opinion, a rare occurrence.

In speaking of acute rheumatism I would record here my experience that in patients *under the age of puberty* acute rheumatism seldom or never happens without most seriously involving the heart; and the younger the patient (I have known it occur at five years) the more certainly fatal is this heart affection. I have never seen a single subject in the above category who eventually shook off the heart affection and recovered. And, in addition to the ventricular hypertrophy and dilatation constantly present in these cases, as well as the valvular disease, I must mention a morbid appearance perhaps equally constant, and which I think has been overlooked by pathologists, or only casually if at all mentioned—viz., a tough, dense, false membrane lining the general interior of one or other of the dilated auricles, generally the left, obliterating the muscoli pectinati almost entirely, and so converting

the auricle into an uncontractile sac: thus furthering mitral regurgitation, and, by its undoubted effect of congesting the lungs and brain according to the auricle affected, mainly producing the frightful dyspnoea and brain symptoms which constitute the worst features of the malady.

Of what value is the nitrate of potash in large doses in *acute rheumatism*? I have had no experience of it myself in *acute* rheumatism, trusting as I have done to calomel, opium, Dover's powder, antimony, and, in the worst cases, bleeding; but my friend Dr. Fenwick, of North Shields, who afforded me valuable assistance in preparing the first series of the above cases, when clinical clerk in this house some years ago, as did also Mr. Gibb, informs me that he has adopted it to a large extent in private practice in Shields, and has found it to answer in a remarkable manner. I would also refer you to Dr. Basham's cases of the acute form, and his treatment by the nitrate of potash in large doses,—a paper read to the Royal Medical and Surgical Society of London, and published in the *MEDICAL GAZETTE*, Nov. 24, 1848. His success was great, the urine acquiring a high specific gravity, and the salt being detected in it. The specific gravity was raised to 1030 and 1040, which he thinks was owing to the nitrate, though Dr. C. B. Williams attributes it to the urea and the lithates which are by its agency made to be present in the urine. Dr. Basham states his belief that, owing to its agency in acute rheumatism, there is a certain degree of *exemption* from disease of the heart.

I will conclude this paper (already too long) by recording certain facts and deductions which have manifested themselves to me from the careful investigation I made of the above cases.

In 9 cases out of those wherein no relief or only slight relief was obtained, there were either *purulent collections* somewhere, or the usual *common inflammations* which precede suppuration—such as testitis, obstinate conjunctivitis, erysipelas. Are we entitled to deduce from this the general therapeutic principle, that in chronic rheumatism, when it is in that aggravated form in which we have pus circulating in the blood, the treatment by nitrate of potash is not to be depended on, and must be relinquished for another?

Again, in 81 out of the 100, the cure was almost or altogether effected in 14 days by the nitrate of potash in large doses, and these were cases wherein, though severe, there was no suppuration, nor ordinary inflammation of particular organs. It has been before laid down that nitrate of potash acts primarily on the nervous system. May we not infer, then, that

those 81 cases were cases in which the nervous system was alone at fault? And, from the two considerations taken together, may we not look at rheumatism as a disease composed of two varieties—viz., that in which its assaults are expended on the nervous system alone, and that other more severe one in which pus circulates in the blood? Various observations and reflections have led me to take this view of the subject. Rheumatism is first a nervous and then a blood disease, and it maintains a distinct individuality in both these phases in a manner more singular than other complaints.* In what I call its nervous form it is a kind of Harlequin inflammation, and less mischievous than it seems. A little energy will knock it out of the system: if uncontrolled, it undergoes a transmutation, becomes grave, enters the blood, and changes it, and walks into the heart itself, the citadel of life. At present we want a set of careful microscopic experiments on the blood in all the varied conditions of rheumatism. Last year, at my request, Mr. Gibb took for microscopic examination small portions of the blood of several patients affected with different diseases. In the blood of one who had no trace of inflammatory affection of any kind we found, to our surprise, numbers of pus globules. In a few days there was developed in this patient a severe erysipelas, which finished by becoming phlegmonous. Here, then, inflammatory disease existed in the blood for a certain time without betraying its presence, until at length its increase became such (*vires acquirit eundo*) that nothing but an acute attack upon the skin sufficed for its elimination.

3. In cases wherein *mercury* has been previously extensively taken, and in cases where there is syphilitic malady present in the system, whether mercury has been taken or not, the nitrate of potash is without power. The remedy is the *hydriodate* of potash.

4. In cases of general chronic rheumatism, in which *sciatica* is the most painful feature, the nitrate of potash will banish the complaint from the other parts, but will not avail against the sciatica. In this

event, *arsenic*, where it is borne, is the most powerful remedy.

5. In cases wherein the symptoms are doubtful, being circumscribed though severe, and simulating such other common inflammations as pleuritis, peritonitis, ordinary cerebral or spinal meningitis, and even spinal irritation and hysteria, the *state of the tongue*, if it appear as if overlaid with a coat of deep or light white paint, so constant in the rheumatic condition, will most essentially guide the diagnosis.

Hospital and Infirmary Reports.

ST. GEORGE'S HOSPITAL.

REPORTED BY DR. BARCLAY,
Medical Registrar.

Severe Lesions of the Brain.

THE first of the subjoined cases deserves careful consideration because its cause was so utterly unlike those we have already narrated, in which as in this there was found on post-mortem examination circumscribed abscess of the brain. The symptoms were of the most acute kind, and associated as they were with disease of the internal ear, it was not difficult to pronounce that inflammation of the brain was present, but there was nothing to indicate that the termination of this had been in abscess. Here there was no paralysis; and in place of depression and listlessness which had marked the former cases, this patient was for many days in a state of maniacal excitement: it is true that towards the close she fell into a state of stupor and drowsiness with some tendency to coma, but how different this from a state of listless apathy with perfect consciousness; and indeed it was manifestly due to the entire exhaustion of the vital energies, as indicated by the failing pulse and the sordes collected on the lips and teeth, and not to any especial condition of the encephalon. The whole detail of symptoms very much resembles the more common form of cerebral inflammation which terminates in effusion in the ventricles, and softening of the central structures of the brain, and in fact, as this condition was also present, it is not improbable that to it rather than to the encysted abscess the symptoms generally were to be attributed. What, then, was the history of the abscess? did it occur after the incursion of the inflammatory symptoms with the attendant delirium, or does its thick investing membrane indicate a prior existence?

* Look at its remarkably migratory character, its sudden metastases, its lightning-like transitions from one membrane or muscle to others in remote parts! They present no analogy to any ordinary inflammation, but rather to certain phenomena seated at the extremities of the nervous system—urticaria, ambulant erysipelas, erythema, chorea. Dr. Hughes declares (Guy's Hospital Reports, vol. iv. 1846) that, next to fright, rheumatism is the most common cause of chorea (14 per cent.); and frequent occurrence of spasmodic affection with pericarditis, which is rheumatic, has been particularly illustrated by Dr. Bright and Dr. Burrows.

The second case bearing a close analogy to those narrated in an earlier number of this journal differs from the preceding in almost every particular of its progress and symptoms. Hemiplegia coming on rather unexpectedly, without previous illness, without coma or apoplexy, and accompanied by no distinct loss of consciousness, subsequently followed by pain of the head, and unattended by delirium, till the very last day: the cheerfulness of his manner alone contrasts with their dulness and apathy; but how different from days of unconsciousness, and nights of sleepless raving! Yet, if the post-mortem examinations be alone considered, there is scarcely any thing to mark the difference between the two cases now given. Violent meningeal inflammation, softening of the central structures of the brain, and general vascularity of the substance of the hemispheres, are found in each: the only difference (and this truly not a small one) is in the locality of the abscess towards the upper or towards the lower surface of the middle lobe, for in each the thickened walls of the cyst closely correspond.

But what is the history of all this increased vascularity of brain and membranes, this effusion of semi-purulent fluid, and softening of the fornix and septum lucidum, of which so feeble a trace is found in the general symptoms? Can it all have occurred in the 12 hours immediately preceding dissolution in which the severe rigor occurred? It can scarcely be so. It must have been proceeding quietly, almost imperceptibly, for some time previously; but knowing how rapidly pus may be formed in diffuse inflammations, it may be concluded that the purulent fluid found under the membranes and in the ventricles was all thus suddenly poured out, and that it was owing to the serious lesion of longer standing that its effect was to produce a fatal termination in so short a period; and, as in the former instances, I am inclined to regard the abscess as of a date prior to the occurrence of paralysis.

The former of these two cases acknowledges the more common cause of circumscribed abscess,—viz., disease of the bones of the skull, and especially of the temporal bone and the internal ear; in the latter no cause is discovered for the occurrence of the abscess.

Charlotte A—, æt. 26, admitted into St. George's Hospital on the 11th April, 1849, under the care of Dr. Nairne. When first brought to the Hospital she was in a state of maniacal excitement, of the origin of which it was difficult to get any account. It was afterwards learned that she had an eruption of boils all over the body immediately after her return from the country,

which were repressed after exposure to cold about three weeks ago, and from that time she had suffered more or less from pain in the ear, accompanied by discharge, which had continued until she became delirious three days ago, since which the discharge had very much lessened. When admitted, she was talking wildly, laughing and crying, but gave no rational answers to any questions; she was obliged to be placed under restraint, and yet she contrived to kick everything off the bed when not closely watched. The pulse was quick and weak, the tongue white and pasty, the head hot, pupils dilated, bowels much confined. Croton oil was ordered, followed by an enema at night, and an ammoniated saline draught, with cold water lotion to the head.

She passed an exceedingly noisy and violent night: the enema was retained, and a turpentine enema had to be administered the following morning before relief was obtained, when a copious, lumpy, dark and offensive stool was passed. She had been so low in the morning that it was thought necessary to give her wine; since then she had been more quiet, and generally lay pretty still when left quite to herself, but began to talk wildly whenever she was spoken to. The pulse was still feeble, and there was much tremor in her manner; she laid hold of the hand of the physician, and placed it first on her forehead and afterwards at the back of her head, but she made no complaint of pain. After another dose of croton oil she was ordered to have three grains of calomel three times a day, until the gums become tender; cold lotions continued to be applied to the head, and sinapisms to the feet, while a blister was placed at the back of the neck.

On the 7th, there was some tendency to opisthotonos; the eyes were fixed and staring, the pupils dilated, and the eyelids were not moved on drawing an object suddenly before them. The discharge from the ear continued to be very slight, indeed scarcely perceptible. The urine had to be drawn off occasionally by catheter, and purgatives to be repeated frequently. On the whole the tongue became cleaner, the pulse quieter, and she became more composed; but her intelligence remained perfectly obscured, and it was evident that she was gradually becoming weaker.

On the 11th, the motions and urine began to be passed unconsciously in bed; she was dull and stupid, and inclined to dose; refused to answer at all when spoken to, or to put out her tongue, but sordes were beginning to collect on the lips and teeth. She was very weak, and wine was again given, and now persevered in regularly.

No further change of any importance occurred; she gradually sank until the last day, when there was for a very short time a return of the noisy delirium, which was followed by low moaning; subsequently passing into coma, and death occurred on the evening of the 16th; nearly five weeks from the commencement of her illness, and fifteen days from the incursion of delirium.

Post-mortem examination 18 hours after death.—Body well formed; two small superficial wounds on back of left shoulder.

Cranium somewhat small, and compressed laterally: a small dark-coloured clot was found in the superior longitudinal sinus; the membranes of the brain highly vascular, but more so on the right than on the left side. A considerable quantity of semipurulent fluid was found in the subarachnoid areolar tissue, both on the surface and at the base of the brain; the convolutions were flattened, and the substance of the brain was very soft, dripping with serum, and marked with an unusual number of puncta vasculosa. About six drachms of semipurulent fluid were found in the cavity of the ventricles, and it was observed that the fluid was thicker and more distinctly purulent at the back part and the descending horns of these cavities, especially on the right side, corresponding to an increased vascularity of the lining membrane in these situations; the blood-vessels being considerably distended, of a dotted appearance, and giving the membrane a bright scarlet tinge. This vascularity existed throughout the whole substance of the lower portion of the middle lobe of the right hemisphere. The septum lucidum was completely destroyed, and the body and posterior crura of the fornix were also soft and diffuent. On removing the brain from the cavity of the skull, the under surface of the middle lobe of the right hemisphere, corresponding to the anterior surface of the petrous portion of the temporal bone, presented a patch of ash-grey colour about an inch in circumference; and on cutting directly through the centre of this portion, a circumscribed abscess, about the size of a large walnut, was found in the centre of the lobe, with a well-defined thick investing membrane composed of organised lymph, and of an ash-grey colour; it contained about four drachms of thick white pus; the substance of the brain around it was highly vascular. The dura mater covering the anterior surface of the petrous portion of the temporal bone was of a darker colour than natural, and very vascular. On removing it from the surface of the bone, a small quantity of lymph was found between them; no aper-

ture existed in the membrane. The petrous portion itself, where forming the superior wall of the tympanic cavity, was ulcerated, and a small aperture existed leading into that cavity which was filled with thick curdy pus, and its lining membrane very much ulcerated. The membrana tympani was almost entirely destroyed, and the ossicula were gone. The surface of the promontory was rough and partially absorbed.

Thorax.—The viscera contained in this cavity were all healthy.

Abdomen.—The liver was healthy; a small quantity of pus was found in the hilus of the left kidney; they were otherwise healthy; a pale corpus luteum found in each ovary; uterus congested; bladder and other viscera presented nothing remarkable.

Thomas B., æt. 26, admitted into St. George's Hospital on 27th February, 1849, under the care of Dr. Wilson. This patient stated, that having been quite well previously, he was seized on the 23rd inst. with paralysis of the whole left side; that he was walking at the time, and fell down, but was not deprived of consciousness, nor was sensation much affected. On his admission, paralysis of the arm was nearly complete, and the face was very much drawn to one side; his speech was very indistinct, but he could walk pretty easily, only dragging the left leg by a very little; the pulse was full, but quiet; the tongue clean, and the bowels reported open. He complained of a good deal of pain in his head: he was directed to be cupped between the shoulders to ten ounces; to have five grains of calomel that night, and a black draught next morning, and to take a mixture twice a day containing compound decoction of aloes and camphor julep, of each six drachms.

On the following day, as there was still much pain in the head, he was bled from the arm to eight ounces; and, two days later, cupping-glasses were applied to the temples, and a bag of ice was applied to the top of his head; the purgatives were repeated. Under this treatment the pain of the head was relieved: he was lively and cheerful, and said that he felt himself much better. There was no confusion of intellect, and no remarkable drowsiness. Six grains of grey powder were given him every night in addition to the draught, which produced a slight effect on his gums, and everything seemed to be going on favourably. He was up and walking about the ward, and was beginning partially to recover the use of his arm, but the face continued very much drawn to one side.

On the evening of the 24th he was quite unexpectedly seized with a severe rigor:

he shook like a person in the cold stage of ague, and his hands and feet were cold, the extremities of his fingers being perfectly white. An ether draught was given him, and external warmth applied, after which intense reaction followed, in the midst of which he had a fit, became comatose, and died in less than 12 hours after his seizure.

Post-mortem examination 12 hours after death.

Body well formed, and in good condition.

Cranium.—The layer of arachnoid investing the brain was highly vascular, especially in the vicinity of the pons varolii, and on the under surface of the cerebellum. The subarachnoid cellular tissue over the entire brain was infiltrated with pus, which filled the sulci between the convolutions, but was most abundant along the course of the middle meningeal artery, and at the posterior part of the base of the brain. Towards the upper part of the right hemisphere the convolutions were much flattened, and somewhat softer than on the opposite side of the brain. In the white substance of the right hemisphere, immediately above the roof of the lateral ventricle, and about an inch beneath the surface of the flattened convolutions, there was a circumscribed abscess of sufficient size to contain a large walnut. It was filled with thick, greenish-coloured, and rather fetid pus; and its walls were formed by a firm, dense, semitranslucent membrane about a line in thickness, in which some small spots of blood resembling ecchymoses, and a very few minute vessels, were observed. The inner surface of the membrane presented a coarsely-reticulated appearance: its outer surface was closely adherent to the medullary substance of the brain, which, for about two inches round, was softened and tinged of a pale yellow colour. The lateral ventricles were filled, but not distended, with sero-purulent fluid, and their lining membrane was highly vascular, especially that of the right side, which presented an ecchymosed appearance. The choroid plexus was dark-coloured and tinged with blood. The fornix, septum lucidum, and portion of the brain immediately contiguous to the lining membrane of the ventricles, was softened. The other parts of the brain presented nothing remarkable.

The other viscera were not examined.

Correspondence.

SIX PAPERS ON THE CLASS OF MEDICAL LITERATURE MOST NEEDED IN THE PRESENT DAY. ADDRESSED TO STUDENTS OF ST. BARTHOLOMEW'S HOSPITAL. BY HORACE DOBELL, MEMBER OF THE ROYAL COLLEGE OF SURGEONS.

No. II.

The conclusion to be drawn from an examination of the history of medicine. Division of knowledge into three classes. Circumstances under which the study of medicine has been conducted. General character of medical knowledge in the present day; the class to which it belongs. Standard of perfection in medical science. Nature of the knowledge required to raise medical science from its present to a perfect state.

THE history of the science of medicine which has now been briefly reviewed, is sufficient for our present purpose: it does not, however, treat of the exact period in which we live; this has been omitted by M. Renouard for sufficient reasons, which need not be here enumerated. From this history, and more deeply from the perusal of detailed accounts, one pleasing impression cannot fail to be made upon the mind—that our profession has continued to improve from age to age; that, from the first traces of medical knowledge, from the time the idea of treating diseases first arose in the human mind down to the present day, there has been a gradual increase in the amount of information possessed on these matters. Although there have been periods, as we have seen, when the science of medicine seemed to suffer degeneration—times when no movement, either in advance or in a contrary direction, appeared to be made; yet we observe that, in the end, it has proved that an improvement was being effected—in some cases that the state of apparent inactivity was a sort of period of incubation, to be followed by the production of some great advance in scientific knowledge. Thus we have seen, during the first five centuries after the fall of Troy, that science appeared to be sunk in utter darkness, if we were to judge from any *public* changes in its progress; but the termination of this period of silence was marked by the dispersion of the followers of Pythagoras, and the well-known flood of light which then burst upon the scientific world. We have observed the obscurity of science, the absence of improvement, during the “mystic period,” when the practice and study of medicine were confined to the temples; but how was this silence broken—but by the voice of Hippocrates! The records of dis-

ease, of its symptoms, and of every discovery in its treatment, handed down from father to son, among the priesthood, during scarcely less than five centuries, at length became the property of the Hippocrates family; and by Hippocrates the Second, the renowned of Cos, these records were unveiled, and, with the addition of his own valuable observations upon them, were laid before the world.

In some cases the apparent degeneration of medical science, the apparent retrograde in its course, has been only the period occupied by a transfer of knowledge from nation to nation,—from those by whom it had been carried as far as their powers were then capable of, to those who were fitted to bear it further onward towards perfection. Thus we have seen the transfer of scientific knowledge from the Asiatic nations, among which it had flourished for a certain number of years, into Europe, there to be carried on for a few centuries until the inhabitants of Greece, in the course of four hundred years, appeared to have exhausted their energies, to have grown tired of the study of the sciences, and, among others, of medicine. Anatomy was neglected; their attention was turned to other themes; their minds occupied by religious controversies, and medical science fell again into obscurity. There appeared to be a degeneration; but the mind of the Arabian people, less occupied, and just prepared to seize with avidity upon the novelties of science, saved them from oblivion; and during a considerable period of time the study of medicine was carried on among the Arabians with considerable ardour, and the names of Razes, Halli-Abbas, Avicenna, and Albucasis, became connected with new improvements in medicine; while the literature of Greece was in a great measure preserved in the Arabian language. At length Europe rose refreshed from her long sleep, displayed new vigour, took back the learning of her earlier days; the literature of Greece was restored with indefatigable zeal, the knowledge of the Latin authors gathered together; noble discoveries were made, all assisting in the cultivation of the sciences and of enlightenment: and, in a few years, we see the nations of Europe, rich in scientific literature, marching far in advance of the rest of the world.

It is evident, therefore, from a careful examination of the subject, that there has been a steady and constant progress in medical and surgical knowledge; and if it be asked what is the knowledge of the present day, I reply it is all that 3000 years have heaped together—a mass of knowledge almost incomprehensible: and when we consider this we shall not be surprised that it is so ill-arranged. To say

that we have before us the accumulated knowledge of thirty centuries conveys but a vague notion of the state of medical science in the present period. An acquaintance with facts is knowledge. An acquaintance with principles, the result of inductions from facts, is knowledge. An acquaintance with deductions drawn from general principles is knowledge. There are, then, three classes of knowledge. Knowledge may partake of one, or more, of three distinct characters; and, in order to arrive at any just estimate of the state of medical and surgical knowledge at the present day, we must, in the first instance, determine the character of the knowledge possessed on these subjects, and decide to which of these three classes it belongs.

From the earliest ages those who have studied medicine or surgery have done so for the purpose of practising the art of healing; the consequence of this is, that each has in turn observed for himself the phenomena of disease, endeavouring to impress them upon the memory, that each particular assemblage of symptoms, to which some name has been given, and which has then been called a disease, may be well recollected. Medical science has not been studied by men who saw but little of sickness, and had much time for considering the import of the observations made by others, but by those who practised the art; and it has been studied the most by those who practised it the most,—therefore by those who most often witnessed the phenomena characterising each malady, but who had the least time for attending to anything but the fruits of their own observation.

The natural and necessary consequence of these circumstances is, that those who have distinguished themselves by contributing the most largely to medical and surgical knowledge have passed the greater part of their time in collecting facts concerning disease; and it is only the result that we might expect, that the writings of any one of these men should consist chiefly of an enumeration of these facts; it is as natural to expect that many of such writers would record similar facts, and this has been the case; the same phenomena have been recorded by different persons again and again, and each, perhaps, has mingled with them some new phenomenon—something which he has been the first to observe and to record. This has gone on for years; every man, or nearly every man, who writes a book on medicine or surgery, repeats the same process; and hence it has come about that an immense number of facts have been recorded, and that these are as scattered as they are numerous. It is evident that the phenomena of disease impress the

mind and arrest the attention much more often and more strongly than the treatment adopted for the cure of the malady. The phenomena of disease may be observed by everybody—by the sick person himself first, and by his attendant to a very great extent. It is from these two sources that the physician or surgeon obtains much of his knowledge of the condition of his patient. Whether the case be treated or not,—whether the phenomena can be interpreted or not,—whatever the theories in the mind of the practitioner, however little his knowledge of symptoms and their import—there are the circumstances of the case; the hot skin, the deranged intellect, the impaired motor power, the defective secretion, the pain, the changed colour, the cough, the troubled breathing, the anxious countenance, or whatever it may be—these are the mere objects of sense; they as readily impress the mind as the objects of nature are reflected in a mirror, and, therefore, are likely to be the most frequently recorded—recorded by the ignorant and by the learned—by the thinking man and by the mere observing man—by the practical man and by the theorist—by all they are capable of being recorded with considerable accuracy. There is, then, at the present day, the whole mass of facts concerning the phenomena of disease which have in various places and at various times been accumulated since men first visited the temples of Esculapius to write upon the walls the particulars of their afflictions.

Galen made a great name, which time has not decayed. He was the first who directed attention to *anatomy*, the first who made great discoveries in this part of our science. He had many disciples, who followed diligently in his steps. He has had disciples ever since his death; and in the present century anatomy is cultivated with extreme care, and for the most part by those studying the medical profession. There have been immense improvements in the knowledge of anatomy worked during the last century; and this knowledge is like that of the phenomena of disease, it is an acquaintance with the objects of sense, an acquaintance with things which any human being may see who has diligence to search and eyes that are not blind. The knowledge of anatomy, so great at the present day, is, then, a collection of *facts*.

Morbid anatomy.—The practice of examining bodies after death for the purpose of observing the changes worked in parts by disease, almost unknown to the ancients, has during the last two centuries become more and more common, and at the present day is carried to a very high degree of perfection, examinations being made of all parts of the body with a scrupulous

accuracy; and the improved knowledge of normal anatomy allows the changes of disease to be definitely marked. A knowledge of morbid anatomy, like that of normal anatomy, consists in an acquaintance with objects of sense: from this source we have again a new tribute of facts.

The Microscope.—Both medicine and surgery owe much to the microscope: within the 17th and 18th centuries, but particularly in the past portion of the 19th century, great additions to our knowledge have been made by this means—additions which could not have been made without it: but the microscope can only add to our acquaintance with objects of sense—it reveals only things already existing, but hidden from our sight, and, in doing this, it has added largely to the accumulation of *facts*.

Chemistry.—To the attention chemists have directed to the study of the constituents and products of the body, under states of health and of disease, we owe much. It has been, like the microscope, a revealer of things hidden from observation without its assistance; but we shall find that, although the revelations of chemistry are not exclusively objects of sense, like those to which we have already referred, yet that the largest tribute that chemists have made to the science of medicine is not in principles, but in an addition to the accumulation of correct facts.

The stethoscope is, to a great extent, during life, what morbid anatomy is after death. Heavy indeed is the debt which medicine and surgery owe to the stethoscope, for the addition of numerous invaluable *facts* to the knowledge of the present day.

Physiology teaches the functions of the organs and structures revealed by anatomy—certain influences, properties, qualities. Here, again, we have an addition of facts. Physiology has marched boldly of late, and the number of new facts added to the knowledge of medicine and surgery is proportionately large.

We have seen, then, that the diligence of men in the study of diseases, the perseverance of those who have followed anatomy, physiology, pathology, chemistry, &c., the assistance rendered by great discoveries, have all acted principally with one effect—they have all added, atom by atom, to the vast store of *facts*. In a view of the matter so cursory as the present is obliged to be, it would be useless to attempt to point out all the numerous varieties in the character of our medical and surgical knowledge, and it would not be of any great advantage that we should do so, for it is the *general* character which is important for us to learn: the *general* characters

are all that we can possibly learn of past ages; and, if we are able to judge of the causes and effects of these, we shall also be able to do the same of the present age, if we ascertain its general character. This I have endeavoured to do, and I have called attention to a few of the circumstances which lead me to the conclusion, confirmed, I believe, by every day's experience, that the general character of medical and surgical knowledge, in the present day, consists in a very correct acquaintance with those points which may become subjects of observation—with the objects of sense. In short, that the knowledge of the present day belongs to the first of the three classes I have mentioned—an acquaintance with facts.

I shall assume that we have now solved our first problem, and ascertained "the present condition of the thing to be improved:" my next duty is to point out some standard of perfection in medical science. The object of medicine and surgery is to cure disease. An idea of perfection in a science having this object would be realised if we possessed—1, a knowledge of the human body in a condition of health; 2, a knowledge of the phenomena indicating this condition during life; 3, a knowledge of the human body under every condition of disease; 4, a knowledge of the phenomena indicating each of these conditions during life; 5, a knowledge of the processes by which these changes of disease are worked; 6, a knowledge of the causes of these processes; 7, a knowledge of the means by which these causes of diseased processes may be removed; 8, a knowledge of the means by which the processes may be arrested when set in action. Assuming this to be correct, we have now established our second proposition—viz., "a standard of perfection in the thing to be improved." It remains for me to point out the links deficient in the chain—the absent knowledge between the present and perfect condition. My estimate of the state of medical and surgical knowledge at the present day consists of those points discoverable by the senses, and these will include numbers 1, 2, 3, 4, of the constituents of perfect medical science—viz., a knowledge of the conditions and symptoms of health, and of the conditions and symptoms of disease. Of course, I do not suppose that we are *perfect* in these four points; but, as I have stated before, we must speak generally; and I believe that, in that sense, these may be taken as the points in which we may be called perfect. Now, if we subtract these four items of knowledge from the eight by which I have represented perfect medical science, we shall ascertain definitely how much and

what there is to be done to arrive at perfection: we shall learn exactly "what parts are yet deficient;" and, unfortunately, they form a very serious prospect; for there are still remaining, after this subtraction—1st, a knowledge of the processes by which diseased changes are worked; 2d, of the causes of these processes; 3d, of the means by which these processes may be arrested; and 4th, a knowledge of the means by which the causes of disease may be removed. And now we have established three of our propositions—"the present condition of the thing to be improved," "The ideal standard of perfection," "The parts yet wanting to bring the thing from its present to a perfect state."

[To be continued.]

Medical Intelligence.

THE CHOLERA AND INFLUENZA IN THE WEST INDIES.

LETTERS from the West Indies of the date of September 13th announce that the islands were generally healthy. Cholera had almost entirely disappeared. Small-pox had appeared in Trelawny some few weeks before the departure of the last packet, but there were no accounts of its spreading; on the contrary, it is stated that it was confined to a particular locality.

In Surinam, the yellow fever epidemic, which had been raging in that colony with destructive effect for several weeks, was rapidly on the decline. The Government still continued to publish lists of the deaths that occurred from day to day in Paramaribo, but all apprehension respecting the spread of the epidemic, which proved so particularly fatal among the troops and shipping, appeared to have vanished from the minds of the population.

In Antigua the influenza was very prevalent.

In Barbados also the ravages of this epidemic had been to a serious extent, and business had been much interrupted thereby.

In Grenada the state of the public health was unsatisfactory, and the influenza, with other disorders, had afflicted the inhabitants.

HOMŒOPATHY AND THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE following "Requisition to the Council of the Royal Medical and Chirurgical Society" is in course of being signed. We understand that it will be presented at the commencement of the session in November:—

"We, the undersigned Fellows of the Royal Medical and Chirurgical Society, being convinced that the doctrines of homœopathy and mesmerism are utterly fallacious, and inconsistent with the facts of medical science, hold that they are unworthy to be professed or in any way countenanced by members of this Society, the object of which is the promotion of a sound knowledge of medicine and surgery.

"We therefore request the Council to take this subject into consideration, with the view to prepare regulations whereby all homœopathic, mesmeric, and similar irregular practitioners, shall be excluded from the fellowship of this chartered corporation.

"And we hereby request the Council, with as little delay as possible, to summon a special general meeting of the Fellows to resolve on the same."

THE SMALL-POX AMONG THE TRIBES OF NORTH AMERICAN INDIANS.

OUR readers are doubtless familiar with the accounts given by travellers of the fearful ravages of small-pox among the native tribes of North America, whole nations of these people having been completely exterminated by this scourge. Late accounts have reached us of the appearance of this pestilence among the Sac and Fox Indians, under which visitation between one and two hundred speedily fell victims. The spread of the disease has been arrested by inoculation. Fifteen hundred out of twenty-six hundred have submitted to the operation, and not one who has thus taken the disease has died. Of those who took it in the natural way, every confluent case terminated fatally. None who had been previously vaccinated took the small-pox in any form. If vaccination so effectually protected some of these people, why should the more dangerous expedient of inoculation have been had recourse to with the others?

ROYAL COLLEGE OF SURGEONS.

THE following gentlemen, having undergone the necessary examinations for the diploma, were admitted members of the College at the meeting of the Court of Examiners on the 3d inst., being the first meeting of the session:—Messrs. Joseph Coleman Wright, Dublin—George Graham, Cootehill, county of Cavan—Charles Coates, Leeds—Henry Hanks, Malmesbury, Wiltshire—Lawrence Francis Mahony, Bedford Square east—Henry Joseph Herschel Griesbach, Millington, Yorkshire—John Davies, Brecon—Thomas Smith Hollingsworth, Leicester Square—Edward John Complin, Charterhouse Square—Thomas Le Gay Holthouse, Australia—

Charles Thompson Abbott, Nenagh, county of Tipperary—and Thomas Whitefield, Millman Street.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 2nd October, 1851:—Henry Gramshaw, Gravesend—Francis Nuttall, Bury, Lancashire—Charles William Chaldecott, Dorking, Surrey—John Graham, Rochford, Essex—Leonard George Boor, London—John Joseph Whiting, Lyme Regis—James Parkinson Scowcroft, Bolton le Moors—James Harnett Dawling, Cerne Abbas—William Henry Cutts, Chesterfield.

OBITUARY.

ON the 21st ult., at Norbiton, near Kingston-on-Thames, Charles Bell, Esq., M.D., in the 74th year of his age.

On the 2d inst., at 1, St. Margaret's Terrace, Cheltenham, John Barron, M.D., F.R.S.

Selections from Journals.

ON THE USE OF RECENTLY EXPRESSED JUICES OF PLANTS. BY DR. GUSTORF, BERLIN.

THE use of the recently expressed juices of plants, the author observes, is one of the many things which, although in high estimation among our ancestors, has fallen into unmerited neglect and disuse in our own times. Notwithstanding, he remarks, that in our over-wisdom their use is despised, it exists in nature, and would not die out even if unemployed by man. Animals whose teeth and jaws prove them to be carnivorous, frequently manifest a strong predilection for vegetable food. The bear in the summer season prefers the soft juicy fruits, and eats the sprouting corn, young maize, &c., with avidity; the hyæna, when he has torn open the graves, is not more eager for human bones than for the fleshy root of the *Asphodelus*, the common ornament of oriental graves; when the dog feels himself indisposed, he seeks the soft blades of a certain kind of grass; while the wasp-falcon, *Falco apivorus*, which is essentially a bird of prey, prefers succulent vegetables to any other kind of food.

The author proceeds at some length to show that man was originally a vegetable eater, and points out several tribes who avoid animal food; observing at the same time, that in general, the warmer the cli-

mate the more strictly do the inhabitants subsist on a vegetable diet, and *vice versa*; the same rule being also more or less observable, according to Dr. Gustorf, in temperate climates, correspondingly with the alternation of summer and winter, salads and other vegetables being largely eaten by European nations during summer months. If, then, the author observes, vegetables be still so largely and profitably used in culinary operations, why should they have become so entirely forgotten and overlooked in therapeutics? At the present day the expressed juices of plants are scarcely known in practice; in the middle of the last century their use was much more extensive. Elias Büchner, at that time a renowned practitioner at Halle, Heinrich Delius, of Erlangen, and Ernest Heim, extensively employed the fresh juices of plants, and brought their uses into great favour. The benefit of vegetable juices in hepatic and intestinal derangements was extolled by Heberden. Dr. Gustorf further alleges that in the same way that the use of fresh vegetable juices has been thrust into the background, so also has the employment of vegetable extracts been neglected. This, he observes, is in some degree owing to their having been prepared over fires, whereby they have been burnt and their properties injured, whereas they should have been evaporated over steam, at a temperature of from 145° to 165° Fahr., not in any case exceeding 190° Fahr.—*Casper's Wochenschrift*, 1851. X

CASE OF A MAN BITTEN BY A MAD DOG. BY
L. W. TRASK, M.D., OF HIRAM, OHIO.

MR. W. E. was bitten on the right hand, some two and a half years since, by his own dog. This excited considerable surprise, as the creature had been uniformly playful and affectionate. Some members of the family, however, had noticed that the dog had not appeared quite as well as usual for a few days. The next morning, contrary to his usual habits, he was missing. In the course of the day, it was ascertained that he had been busily travelling during the night, and had bitten some four or five other dogs. He had, by this time, gone several miles from home, and exhibited such plain symptoms of hydrophobia, that he had been killed. As there was considerable alarm in the county about mad dogs, every one that he had bitten was either killed or tied up. Ten days after he had been bitten, Mr. W. E. presented himself to me for treatment. I carefully considered every circumstance connected with the case, and came to the conclusion, that in all probability he had actually been bitten by a *rabid animal*.

Upon careful examination, there appeared

to be, in all, five wounds inflicted by the dog's teeth; one on the back of the hand, another on the palm, and three on the fingers.

I excised as thoroughly as possible the parts in and around each wound, encouraged bleeding by warm applications, and applied cupping-glasses wherever it was practicable. In this way I obtained quite a quantity of blood. Next, I cleansed the wounds carefully with tepid water, and put into them a strong solution of nit. arg. I then filled them with lint to prevent adhesion, and applied stimulating plasters; directed my patient to take a cathartic of salts and senna, and to keep quiet. He got along very comfortably—wounds discharged freely, and were kept open, by the constant use of lint, about a month.

But my fears for him were very much increased when I heard that the dogs that had been secured had shown symptoms of hydrophobia, and had been killed. However, after six weeks had elapsed, and my patient continued comfortable, I began to entertain hopes of him, which proved to be well founded; for he has experienced no bad effects whatever from the bites to this time.

It will be readily understood, that the foregoing treatment is not original with me; yet the fortunate result of this case has given me considerable confidence in it. The object aimed at, as every one will see, is to remove the poison from the wound before it shall be absorbed into the general system. We may be encouraged, I think, to practise excision after the lapse of weeks, if no bad symptoms have come on; because the poison of rabid animals, unlike that of the rattlesnake, is absorbed very slowly. But the sooner the operation is performed, the better.

In conclusion, I would remark, that excision and the application of the cupping-glass will be found equally successful in bites of poisonous snakes, if practised sufficiently early. But in this case it must be attended to immediately.—*Ohio Medical and Surgical Journal*.

TWO CASES OF MUMPS, WITH METASTASIS TO
THE BRAIN, BOTH TERMINATING FATALLY.

DR. HARVEY LINDSEY records the following examples of this rare accident:—

"In January, 1849, a son of Gen. W., who at the time was a student of medicine and attending the lectures of the medical school in this city, was attacked with the mumps, and after a few days' illness died, as I was informed, from metastasis of the disease to the brain. I cannot give the particulars of this case, as the patient was not under my professional care. On the first day of February following, about a

week after the death of this young man, I was requested to see his brother, (ætat. 20,) a student of Princeton College, who was at home on a short visit to his friends. I found him labouring under a well-developed attack of mumps of the left side, the gland considerably swollen, and with some fever, though, on the whole, suffering but slightly, and feeling, as he remarked, very comfortable. The disease seemed to be taking its usual course, and, if it had not been for the recent death in the family, would have excited little interest or observation. As it was, however, his friends felt some anxiety, and I was induced to attend the case more carefully than I should have thought necessary under ordinary circumstances. As precautionary measures, I directed pretty active purgatives, followed by diaphoretics, hot pediluvia, warm flannel to the swollen gland, &c., and watched very closely for any indications of disease of the brain. I could detect nothing of the sort, however, and until the fifth day everything seemed to promise a favourable termination. I examined my patient carefully twice a day, with reference to the condition of the testicles as well as the brain. But there was no apparent disturbance of the functions of the one, and no enlargement of the other. He was cheerful, slept naturally, and felt confident of a speedy recovery. Upon examining him, however, on the morning of the fifth day, my apprehensions were excited by finding that he was labouring under *priapism*. I dreaded this symptom the more, as the disease seemed now to be taking the same turn that proved fatal in his brother's case. He was immediately ordered to be leeches freely at the base of the brain; a blister was applied to the nape of the neck, purgatives given, and an active general antiphlogistic treatment adopted. At the same time, additional professional advice was obtained. During the whole of this day, however, the priapism was the only indication we could detect of diseased brain.

On the next morning we were informed that he had been labouring under delirium the greater part of the night—had been restless, and suffered much. These symptoms continued to increase in violence, convulsions came on, and in a few hours death closed the scene on the sixth day of the disease and the second after the appearance of the priapism.

A careful examination of the brain was made thirty hours after death, when decided marks of inflammation and congestion were found in the cerebellum, but none in the cerebrum.—*American Journal of the Medical Sciences*.

BOOKS & PERIODICALS RECEIVED

DURING THE WEEK.

(The List will be given in the following No.)

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Oct. 4.

| BIRTHS. | | DEATHS. | |
|-----------|------|-----------|------|
| Males.... | 729 | Males.... | 534 |
| Females.. | 700 | Females.. | 480 |
| | 1429 | | 1014 |

CAUSES OF DEATH.

| | |
|--|------|
| ALL CAUSES | 1014 |
| SPECIFIED CAUSES | 1004 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 260 |
| <i>Sporadic Diseases, viz.—</i> | |
| 1. Dropsy, Cancer, &c. | 33 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 115 |
| 4. Heart and Bloodvessels..... | 39 |
| 5. Lungs and organs of Respiration | 98 |
| 6. Stomach, Liver, &c. | 65 |
| 7. Diseases of the Kidneys, &c. | 13 |
| 8. Childbirth, Diseases of Uterus, &c. | 4 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 8 |
| 10. Skin..... | 2 |
| 11. Premature Birth | 0 |
| 12. Old Age | 49 |
| 13. Sudden Deaths..... | 27 |
| 14. Violence, Privation, Cold, &c.... | 74 |

The following is a selection of the numbers of Deaths from the most important special causes:

| | | | |
|--------------------|----|------------------|-----|
| Small-pox..... | 18 | Convulsions..... | 40 |
| Measles..... | 17 | Bronchitis | 39 |
| Scarlatina | 48 | Pneumonia | 43 |
| Hooping-cough | 21 | Phthisis | 119 |
| Diarrhoea..... | 63 | Lungs | 9 |
| Cholera..... | 4 | Teething | 9 |
| Typhus..... | 61 | Stomach | 4 |
| Dropsy | 15 | Liver..... | 16 |
| Hydrocephalus | 21 | Childbirth | 1 |
| Apoplexy | 33 | Uterus | 3 |
| Paralysis | 14 | | |

REMARKS.—The total number of deaths was 34 above the average mortality of the 40th week of ten previous years.

METEOROLOGICAL SUMMARY.

| | |
|---|-------|
| Mean Height of the Barometer | 29.38 |
| „ „ „ Thermometer ^a | 53.2 |
| Self-registering do. ^b Max. 0.0 Min. 35.5 | |

^a From 12 observations daily. ^b Sun.

RAIN, in inches, .61. — Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 5° above the mean of the month.

NOTICES TO CORRESPONDENTS.

We have to acknowledge the receipt of communications from Dr. Belcombe—Dr. F. Renaud—Mr. Bainbrigg—and Mr. Reid. These will be inserted as early as our arrangements will permit.

The Cases from the Royal Free Hospital, published in our last number, were not, as there stated, reported by Mr. Gay.

Mr. C. H. Roper's letter has been received.

Lectures.

—
ON THE

OPPORTUNITIES OF ACQUIRING
PROFESSIONAL EDUCATION
AT GUY'S HOSPITAL,
AND
THE SPIRIT IN WHICH THEY
SHOULD BE IMPROVED ;

BEING THE INTRODUCTORY LECTURE DELIVERED ON THE OPENING OF THE MEDICAL SESSION.

BY BENJ. GUY BABINGTON, M.D. F.R.S.

GENTLEMEN,—It is a practice which has been adopted of late years, in all the medical schools of the metropolis, to depute some member of the professional staff to deliver an introductory lecture to the new students, by way of pointing out to them the nature, and impressing them with the importance of the undertaking in which they are about to engage; and although this task, having now been so often performed, can present but little intrinsic novelty, yet every one has his own way of viewing circumstances and of stating facts, however well known, so as to impart to them a certain degree of originality; and moreover, it must be borne in mind, that though the subject be the same, the audience changes; and that, therefore, what is offered, though familiar to the initiated, must be new to the individuals to whom it is especially addressed. Nor will it, perhaps, be altogether thrown away upon those who have already been present on similar occasions. There are important truths which, though known to us, are not so uppermost in our thoughts as to influence our conduct—truths which lie buried in the mind, inert and dormant, like those seeds known to exist in the bosom of the earth, yielding not the fruits of active existence until they are raised to its surface.

The medical schools of this metropolis are none of them of very early date; and ours may perhaps by comparison be ranked among the more ancient. Nevertheless, it is almost within my life-time that the late Dr. Saunders consented, upon solicitation by the Governors, to deliver, within the walls of this hospital, lectures which he had previously read to a class at his own house; and the class which he brought with him, and the lectures which he so delivered, formed, as I have understood, the origin and first foundation of

our present school. From that period, which was about the year 1785, there has been a regular succession of medical teachers in Dr. Harvey, Dr. Relph, my late father, Dr. Curry, Dr. Marcet, Dr. Cholmley, Dr. Laird, Dr. Baek, Dr. Bright, and so down to our own time. Of our surgical school I need only observe, in order to establish its claim to your confidence, that Mr. Clive was its founder,—that Sir Astley Cooper, his pupil, followed him,—and that the present generation were pupils and direct successors of Sir Astley Cooper. As a matter of history, it may be interesting, but it is of little importance to us on the present occasion, to know how our school originated, or by what steps it attained to its present exalted position. What we are mainly concerned with is its actual condition and capabilities; and, before I proceed to offer you any observations on the best mode of taking advantage of the opportunities of instruction which it affords, it seems to me desirable that I should state to you in what those opportunities consist. First, then, I would observe that this hospital is one of the largest in the metropolis, containing more than 500 beds, of which there are seldom a greater number vacant than are sufficient to provide for contingencies. Its situation, too, is such as to give rise to a great variety in the cases which present themselves for admission. Not only are there many large manufactories, some of them of the most unwholesome nature, in the immediate vicinity of our hospital, which is moreover surrounded by a dense population of the lower orders, but the proximity of the river, and the ill-drained and ill-ventilated dwellings which line its shore, are peculiarly favourable to the generation and spread of continued fever, and to the propagation of all those diseases which arise wherever damp and filth, and the overcrowding of human beings, combine to produce them. Intermittent fevers of all types also abound among those who offer themselves as patients here, being engendered on the Kentish shores of the Thames and Medway, in the dockyards of Woolwich and Sheerness, and among those Irish labourers who immigrate to these parts in the summer and autumn, in order to assist in gathering in the harvest, and in picking hops. There is yet another most instructive class of diseases met with more frequently in the borough hospitals than elsewhere in London, in consequence of our proximity to the Thames: I mean, the diseases of tropical climates as found among seamen. To those of our students—and they are not a few—who are destined for the medical service of the army or navy, or of the East India Company, or who pur-

pose to engage in private practice in the colonies; the opportunities thus afforded of studying such diseases is of peculiar value. In the variety, then, of our cases, as well as in their number, our hospital has advantages of its own; but, in order to render it still more complete as a school, there have of late years been added wards for the diseases peculiar to women, a ward for the diseases of children, wards male and female for the diseases of the eye, and, lastly, a maternity charity of vast extent, comprehending, as I learn, 152d part of all the births which take place in London, which enables our pupils to acquire a practical knowledge of obstetric science. So that we might, indeed, affirm with truth that, within these walls, there is an opportunity of studying every variety of human malady, were it not for the necessary exclusion, for obvious reasons, of that large class comprehended under the term mental diseases. I may here mention that, if our establishment is now second to no other of the kind in point of magnitude, it will at no distant period bear the palm in this respect; for our governors having resolved to extend our accommodation, a handsome building, which will, I understand, when completed, contain beds for 300 patients, is now in course of construction, and a portion of it will come into operation in the course of next year.

It would ill become me to boast of the merits of our school in any of those particulars over which the teachers, and myself among the rest, might be supposed to have any control, or to institute in those particulars invidious comparisons between our own establishment and others with similar objects, but the number of cases placed at our disposal does not depend on ourselves.

Now it is evident that, in order to acquire, within a limited time, a practical knowledge of all, or even of the most important varieties of disease which affect mankind, it is a great advantage to have constantly at our command a vast storehouse of cases from which to make our selection. Were medicine an exact science, like mathematics—could we, in well-written works or by oral instruction, so definitely describe disease in the abstract that we should at once, by unerring characteristics, recognise it in all its varieties in individual cases—and were our means of combating it so certain, that our *Materia Medica* might be regarded as consisting of so many specific remedies, each to be discharged, like the miraculous globules of the homœopathic empiric, against its kindred symptom—then, indeed, might it be studied anywhere, in the library as well as at the bedside, in the private dwelling as well as in the hospital. But medicine is not, and

never will be, an exact science, and cannot, for practical purposes, be studied in the abstract alone. It is composed of the rational, the demonstrable, the definite, with the empirical, the doubtful, the unknown; and disease in practice, as every man of experience knows, is so unlike disease as described in even the best books, that the student, when he begins to observe for himself, finds a novelty in every case—a something which he cannot reconcile to any book-definitions—an anomaly which makes him doubt the knowledge of his author—he seldom at first doubts his own—and say within himself, this surely has been overlooked. Gentlemen, there is but one book that will help us out of this difficulty—but one that contains a description that will never mislead us:—it is the Book of Nature. The outline and normal aspect of disease we find depicted by authors, but we want the tints—the shadows—the subordination of symptoms and circumstances; and, to learn these, we require numerous living examples. Why is it that our science cannot be effectually acquired at our learned universities—why that schools of medicine and surgery are to be found in none but large cities? Simply because there are no opportunities of studying disease through living examples. Not only should an hospital, considered as a school for the study of medicine, be ample in size, but it should likewise be ample in funds. I wish to speak without undue disparagement of other institutions; but, when means are scanty and uncertain, the necessity for economy, and even parsimony in eking them out, is prejudicial to the student in two ways:—first, the less expensive remedies are alone employed, and the learner has seldom an opportunity of seeing such a course of treatment pursued as he would deem it proper himself in future practice to adopt; but granting that, even when all other appliances and means are on the most economical scale, there should be no stint in the kind, quality, or quantity of the remedial agents, there is yet a second disadvantage more considerable and more constantly operating than the first. It is this: the patients are dismissed before they are restored to health—not, perhaps, before the more immediate and urgent symptoms of acute disease are removed, but before a satisfactory convalescence is established. True, the number of patients admitted and discharged by this summary ejection is increased—the number of cases so flourishing in an annual report, so flattering to subscribers, is swelled; a conscientious belief may be entertained that the greatest amount of good is thus effected; but, if we send our poor patients of the labouring classes back to their homes, still unable to

resume their employment, and, as well from debility as from renewed exposure to the causes which originated their disease, likely to suffer a relapse,—in my opinion we leave the purpose for which such institutions have been founded but half effected—the work of charity but half performed; and, what I would here more particularly enforce, we do the pupil a great injustice, who witnesses but the invasion, or, at most, the active stages of a disease, but who acquires no experience in the treatment of the convalescence. Gentlemen, it is not, and never has been, the practice of this hospital to consider the number of cases treated any criterion of the amount of good which is done. Our first care should be to perform a complete cure; and only in subordination to this should be our second, that of performing it as quickly as possible.

Having thus adverted to those inherent opportunities for the study of disease which arise out of the magnitude and situation of our establishment, I will now point out such adventitious advantages as have been created by the indefatigable exertions of those who have heretofore been engaged in forming, or are still interested in maintaining our school in a state of efficiency. And here I cannot help pausing to bestow my mite of admiration on our late venerable treasurer, Mr. Harrison, under whose fostering care and judicious management our hospital and school flourished for more than half a century. Fortunately for us, gentlemen, his mantle has fallen on one who, for integrity and firmness of purpose—for zeal in the cause of medical education, as well as of charity—and for that tact and talent so necessary in the government of a vast establishment like this, is every way worthy of being his successor.

One of my colleagues (Dr. Gull) having recently had occasion to set forth the particulars which I now wish to bring to your notice, I cannot do better than quote so much of his statement as suits my present purpose:—“Our museums of human and comparative anatomy are on a scale which entitles them to rank among the first of our national collections. For the latter a new and commodious building has recently been erected. The former is divided into an anatomical and a pathological department, both of which are replete with numerous and illustrative examples, under the several subordinate divisions. The anatomical division contains nearly two thousand preparations of the organs and tissues. This division of the museum deserves especial mention, from its containing a series of wax models of the different regions and organs, which stand unrivalled as works of art, and pre-

sent one of the most complete and most minute representations of the body in existence. Their intention is not to supersede the necessity for dissection by the student himself—nor, indeed, have they that effect; but, amongst other advantages which they possess—such as presenting at a view the ordinary relation of parts, &c.—many of them are from dissections more elaborate than the general skill of a student could enable him to produce during the usual period of his studies; and others represent complex relations of parts which could not be arrived at without many separate dissections, and a knowledge of which the student could not in many instances attain without this assistance from art. To give a description of the whole would be to write an entire work on anatomy; for the nervous, muscular, circulatory, and absorbent systems, have been each fully displayed.

“The pathological department is divided into 12 sections. It contains 4800 specimens, with 2000 drawings representing the appearances in the recent structures. The drawings are arranged in cabinets, so as to correspond to the different sections. This department has also been greatly enriched by a numerous series of models of diseases of the skin, which may with propriety be termed clinical illustrations. They form a valuable and unique contribution to this division of pathology, and amongst them are many rare and some hitherto undescribed forms of disease.

“Besides the preparations and drawings above named, there are 1300 diagrams, or rather enlarged drawings, for the use of the lecturers on anatomy and physiology, surgery, and midwifery, and 660 for comparative anatomy. There are also 330 pathological casts in plaster, showing various deformities, dislocations, herniæ, &c. The museum of comparative anatomy occupies the left wing of the building, and contains 2550 specimens; the ground floor being appropriated to skeletons, arranged in the Cuvierian order, from man downwards. The museum of materia medica contains specimens of all the drugs and preparations in general use, under the different forms in which they are ordinarily met with in commerce, together with the principal adulterations; and, in accordance with a recommendation from the Apothecaries' Society, a plan for affording instruction in practical chemistry has been carried out in a very efficient and ingenious manner. From April until the end of the summer session, the dissecting-room not being wanted for anatomical purposes, has been converted into a chemical laboratory and every appliance that modern science can suggest has been added to render it

complete. The professors of chemistry take it in turn to superintend the analyses performed by the pupils, and are assisted in their labours by one of our most distinguished students, who gives his exclusive attention to this branch of science. The value of this gentleman's services has lately been marked in a manner which must be as gratifying to him as it is honourable. His class has presented him with a piece of plate, in token of their sense of the advantages which they have reaped from his instructions.

"The library contains 3224 volumes. It is supplied with three weekly, six monthly, and five quarterly journals of medicine, natural history, and philosophy. It is open to students daily from nine to five, and each student is permitted to take home one volume, which must be returned by ten o'clock the following morning.

"The dissecting-room is of recent construction, of ample size, and so well ventilated, that, though no means are used for disinfection, the air is kept at all times in a state of purity."

These, then, gentlemen, are the materials with which you are to work. They have been provided with no niggard hand: and perhaps a more fitting opportunity than this could not be presented to me for expressing the high sense which, in common with all my colleagues, I entertain of the able and considerate manner in which our President and Governors exercise the power which has been placed in their hands. I do not, of course, presume to comment upon their general management of the Hospital, or its concerns as a charity: I allude to the constant encouragement and support which we meet with from them in the furtherance of all measures tending to the perfection of the school. This noble institution supplies, if I may so express myself, the raw material, but we owe it to the admirable arrangements of our rulers that this material placed at our disposal, yet without any interference with its original object, is so worked up and turned to profitable account.

True! the philanthropist, Thomas Guy, never contemplated, in this perpetual monument of his beneficence, doing more than administering to the relief of those sufferers who should enter its walls. In his day medicine and surgery were studied in foreign lands. Students flocked to the school of the great Boerhaave at Leyden, and made no use of those sources of experience which were at hand in their own country. But how would our founder's benevolent heart have rejoiced could he have lifted the veil of futurity, and foreknown that the blessings which he designed for the immediate participators in his

bounty—in themselves a countless host—would be multiplied a thousand-fold through the instructive lessons their maladies would afford to numerous students, who would subsequently turn those lessons to profitable account throughout the world at large, and teach them to their successors, as science advanced, with accumulative increase from generation to generation!

Gentlemen, the subjects of your study, and the order in which you should pursue them, being prescribed to you by those examining bodies before whom you must approve yourselves competent ere you can enter upon your professional career, nothing need be said on this matter. Our knowledge of the subjects themselves is progressively advancing; and, though they are nominally the same as when I entered the profession, yet, from the constant additions which have been made, not only of individual facts, but of general laws, they are in reality very different. It may not, therefore, be unprofitable to you to learn, in such a summary way as time alone permits, in what that difference consists; which, in fact, will be a convenient method of making you acquainted with what you will have to master. The science of anatomy, in my days of pupilage, was confined to the investigation and study of the structure of the human frame as discoverable to the eye by the skill of the finger, aided by the forceps, the scalpel, and other similar instruments. This investigation, it must be admitted, was carried to a wonderful degree of precision and minuteness; and it yet remains as necessary as ever, both for the acquirement of that practical knowledge which alone gives confidence at the bed-side, and for the equally necessary attainment of that manual skill which nothing but the constant use of the scalpel will enable us to acquire; but, superadded to this comparatively coarse, though useful knowledge, we have now to learn all those wonderful secrets of minute structure, and of formative processes, which the microscope—that sixth sense, I might almost call it—alone can reveal. Of this potent engine of searching inquiry, difficult though it be to employ it with effect, every one who aspires to the character of a scientific practitioner should know the use. And here I may mention, that, impressed with the importance of microscopic researches, our late treasurer, ever mindful of the interests of the pupil, provided some years ago a costly microscope, second, I believe, to none of those accurate instruments which modern art has produced either in its power or in its workmanship.

Arrangements are made and carried into effect to point out to our students all the

more important anatomical facts which this instrument reveals. Its own structure, and the mode of manipulation with it, are explained, and, as often as opportunity permits, some specimen is placed within its field, accompanied by a written description and diagram, and allowed to remain in the museum for several hours during the day, so that an opportunity may be afforded of studying it at leisure. In this way the natural and diseased tissues, glands, fluids, urinary deposits, &c., are successively shown, and the objects are, in their order of exhibition, made to illustrate as nearly as possible those subjects which are treated of at the same time in the lectures on anatomy and physiology.

Comparative anatomy, which throws so much light on the structure of our own frames, showing that the plan developed in each species of animal is only a modification of an ideal type, and, from analogies of corresponding structures in different animals, enabling us to discover in some instances the uses of parts of our own bodies before unknown, by reference to their more highly developed condition in other creatures, is a science of modern growth. I do not, of course, mean to affirm that nothing was known on this interesting subject before our own day. The labours of a Harvey and a Haller are not to be overlooked or underrated; but its progress under the powerful genius of Hunter in this country, and Cuvier in France, has been such, and its utility in elucidation of our more immediate studies is so great, that a general knowledge of it must be regarded as almost essential to the accomplished medical man; and it is under this conviction that the museum of comparative anatomy of which I have just spoken has been formed.

If I turn to chemistry—that scrutinizer still more minute and searching than the microscope itself of Nature's ultimate elements—I find it so altered, so improved, and so advanced since my days of pupilage, that in some departments it may strictly be called a newly created branch of knowledge. What *was* so imperfect that it was little better than a vast collection of isolated observations, is now, by the discovery of their mutual connections, and their consequent arrangement and generalization, formed into a scientific whole. Facts are grouped together by some common relation or property to form laws, and these laws again are combined to form systems. A grand line of demarcation between inorganic and organic chemistry has been laid down. Well-marked grounds of distinction have been established between the vegetable and the animal kingdom. Animal chemistry has been brought prominently for-

ward, and recognised as a distinct branch of the subject. Accurate observations and improved methods of analysis have led to the modern discovery of isomerism,—that strange and almost inconceivable difference in the arrangement of atoms chiefly observable in organic chemistry, whereby bodies of the same apparent composition become totally different in nature and properties; of isomorphism, whereby certain substances of dissimilar chemical constitution possess the remarkable property of exactly replacing each other in crystallised compounds without alteration of their characteristic geometrical figure. The laws of endosmosis and exosmosis have been discovered and admirably applied to the explanation of phenomena previously observed, but not understood in the mutual relations of fluids and membranes. The laws of light have been more accurately examined, and the curious property of its polarity been not only ascertained, but turned to practical account as a delicate test for the presence in solutions of certain animal and vegetable proximate principles; and the astonishing powers of electricity have been proved and applied to practical purposes of the greatest importance and utility; their connection with magnetism has been traced—their beneficial application to medicine recognised. Yes, gentlemen, all this (and much more besides, which many hours would not suffice to detail) has been added within my own memory to this advanced and still advancing study. Yet think not that the difficulty of acquiring a knowledge of chemistry has increased, *pari passu*, with the progress of the science itself. It is matter of common observation that it is more difficult to recollect even a few isolated words, unconnected by meaning, than a long paragraph in which the sense furnishes a bond of association. In like manner was it far more difficult to remember the numerous unexplained facts with which chemistry abounded in my early days, than, enlightened as the science now is by the laws of combination, by the doctrine of chemical equivalents, by the atomic theory, and by a more perfect system of chemical notation, it is at the present time, notwithstanding its increased extent, and its greater complexity.

With anatomy, human and comparative, and chemistry, vegetable and animal, so much improved, it cannot be a matter of surprise that physiology, pathology, medical jurisprudence,—with that lately much improved branch of the subject, toxicology, and finally practical medicine itself,—should have reaped their full advantage from these sciences considered as instruments for their investigation. Their advancement has, in fact, been in a great measure owing to the application to them of these auxiliary

branches. The microscope has been called in requisition as well in application to morbid products as to natural structures. Chemistry has enlarged our knowledge of poisons and their destructive actions as well as of food and its mode of nourishing the animal system and maintaining its heat; it has made us acquainted with the composition of abnormal as well as of healthy fluids, even furnishing us with useful hints in our endeavours to restore them to health; it has lent us its aid in improving our drugs by separating the active principles from the inert matrix in which they were imbedded; and it has added several powerful remedies to our catalogue of the *materia medica*.

Independently, however, of all such aids, practical medicine has, through the medium of physical diagnosis, made advances of its own every way worthy of this age of progress. The prior appeal was to the sense of touch; the next, to that of hearing.

Gentlemen, I have had the good fortune to go round the wards of La Charité with the great Laennec; and all his grand discoveries in the application of the sense of hearing to the investigation of disease have been, if not made, at least generally promulgated and acknowledged as truths since I entered the profession; and what a revolution has it not created! Formerly, of all diseases those of the heart and lungs were least understood. The thorax, fenced in by walls of bone, and containing organs destined to operate on nothing more tangible than empty air, we seemed to be set at defiance in our attempts to discover what was going on within at once by the solidity and the subtlety of the structures with which we had to deal. How different is the case at the present day! Thanks to the discoveries of this great physician, and to those who have succeeded him in the same path, we can now in most cases, with unerring certainty, pronounce not only the exact nature, but the precise spot in which disease is seated within the thorax; while in the abdomen, the soft parietes of which seem to offer no impediment to investigation, where we can often trace the form, feel the magnitude, and weigh the density of the viscera within, we are sometimes left in doubt, not only as to the seat and nature of the disease, but even in some cases are unable to pronounce whether there exist any disease at all. Think not, however, that the knowledge which the stethoscope or the tutored ear is capable of imparting can be made your own without exertion. Think not that the harvest is to be gathered without the toil of culture. Perhaps of all that you have to acquire among the varied studies connected with your profession

there is nothing so difficult as that of the use of the stethoscope, and the correct appreciation of all that it is capable of revealing; while, as a reward for your pains and application, there is no knowledge which will be presented to you with more conviction of its truth, and certainly none upon which you will act with greater security and confidence, than that which is thus brought home to your minds through the direct medium of your senses.

In the treatment of disease—that ultimate end and object of all our endeavours—I will not affirm that many improvements have not been made within my memory. The abuse of mercury has been checked; iodine and its various compounds have been discovered; hydrocyanic acid and the various vegetable alkaloids have been introduced; cod-liver oil has proved a most valuable addition to our means; æther and chloroform have been used with the most astonishing results; and, lastly, I may mention, as the discovery of one of ourselves—my esteemed colleague, Dr. Rees—not the less remarkable because it is simple, that inestimable boon in acute rheumatism, and, as it may probably prove in other diseases of high action,—the common lemon-juice; second in point of efficacy, I will venture to affirm, to none of those additions to our *materia medica* by which of late years it has been enriched. I will not, I repeat, affirm that in this department of the healing art there has not been marked progress; yet it is in this direction that, in my opinion, the least has been effected, and the most remains to be done. A great gap, in fact, still exists between our knowledge of a morbid state and the means for its removal. The treatment of a disease consisting as it does in the application of means with the ultimate and elementary mode of action of which upon the animal economy we are either wholly ignorant or but partially acquainted, is necessarily more or less of an empirical character. It is founded on experiment rather than on reasoning. Now an experiment, in order uniformly to succeed, requires uniformity in all its circumstances. In a chemical experiment, for instance, we are always able to obtain the same results, because it is in our power to go through the same processes with similar agents; but where the material to be acted on is of so complicated and variable a nature as the animal economy; where the external circumstances and internal idiosyncrasies are seldom twice alike; and, finally, where the remedial agents themselves, derived from the compound productions of the three kingdoms of nature, are liable—first to original difference, which no degree of skill can detect, then to differences in prepara-

ion, and lastly to deterioration from the gradual action of surrounding elements—it must be almost impossible to obtain rigorously precise results. But “fools rash in where Angels fear to tread;” and the modesty and diffidence and candour of the scientific have here, more than in any other department, left room for the bold intrusion of ignorant pretenders. If we would effectually suppress charlatanism, we must endeavour to reduce the practice of medicine to certainty; we must strive to raise it to the standard of a perfect science. Who ever heard of quackery in the science of numbers? It is truth, diametrically opposed to error. There is no medium—no compromise; the result is demonstrably either right or wrong. Whether practical medicine will ever attain this desirable state of perfection is more than doubtful; but we may *approximate* to that which we can never *reach*; and the nearer we approach it, the less chance will there be that unblushing effrontery will succeed in persuading mankind to accept large promises alone in satisfaction of eager expectations, and to believe that knavery and ignorance will easily effect for them that which probity and knowledge find it difficult to accomplish.

Having fulfilled my intention of pointing out in a cursory way the improvements which have of late years occurred in the various branches of professional study, I will now, gentlemen, proceed to offer you a few words in the way of advice.

And first let me ask, Have you taken such pains with your preliminary education, and do you possess such a share of general information, as befits those who are undertaking the study of a learned profession? This is as essential to you as professional knowledge itself; and I strenuously advise you, notwithstanding the urgent demands which will now be made upon your time, to devote some portion of it—and a very little will suffice—to the maintenance of your mathematical and classical attainments. It is always a pity to lose by neglect any portion of our stock of hard-earned yet easily retained mental acquisitions; but, in the case of the medical man, sound preliminary education is the very basis upon which he must build, or the superstructure cannot be raised.

In the human frame, be it remembered, physical as well as vital laws are in operation. All the mechanical powers are placed in requisition. We find in it joints and hinges of various kinds; levers and pulleys, arches, cylinders, pillars and tubes, and forces acting in different directions; and then there are fluids at rest, and fluids in motion, with a pneumatic apparatus always at work; and there is a wonderful optical

instrument of the most exquisite and elaborate construction, and an equally wonderful structure for receiving the vibrations of sound. How then, I would ask, can the principles of action in all these contrivances be comprehended, or their adjustment be conscientiously attempted, by any one who has not some elementary acquaintance at least with mathematical science, with mechanics, statics, dynamics, hydrostatics, pneumatics, optics, acoustics? The value of classical knowledge, too, will be duly appreciated by you when you consider that all the great medical works of ancient times, and many of the most valuable modern productions, are written in the learned languages; that the whole nomenclature of science is derived from them; that examinations as to your proficiency in their acquirement will on these grounds hereafter be made; and, finally, that the better classes of the laity, not being able to form a direct estimate of your professional competency, will necessarily found an opinion on your acquaintance with those subjects which they do *not* understand, chiefly by observing how far you are familiar with those branches of knowledge which *they* have studied in common with yourselves, and which, right or wrong, are made the distinguishing characteristic and standard of what is called liberal education. I am tempted to say thus much, because I am impressed with a belief, which late opportunities as a public examiner have tended to confirm, that in our profession classical learning is on the decline; and depend upon it, that if we do not attempt its revival—if we do not keep up our reputation for being well-educated gentlemen, and, from that circumstance, our claim to be placed upon an equality with the aristocracy of our country, and to be worthy of associating with even royalty itself, we must sink to a lower grade in the social scale. Our profession will no longer be sought as an employment worthy of being followed by persons of family or consideration in society: our emoluments and our respectability will fall together, and the dispensers of health, who, under Providence, hold the balance of life and death in their hands, must be content to consider themselves as on an equal footing with traders in other commodities. Such a consummation would not only be unfortunate; it would be in the last degree disgraceful. In no country of Europe does the medical man rank so highly in public estimation as here. It is in this land of freedom that the value of intellect is most strongly felt, and most readily acknowledged; and is it not *glorious* that, with no other nobility than that of the mind, with no other patrimony than that of education, we can, by our own exertions

alone, rise in this most powerful of all the nations on earth to wealth to rank, and to eminence?

Thus warned not to neglect the stores which you have already acquired, I advise each of you to begin his professional studies with an ardour little short of enthusiasm, as one who delights in the pursuit which he has selected to be that of his whole life, to be that on which he is to stake his reputation, and from which he is to derive the means of honourably maintaining himself, and it may be of contributing to the happiness of many dear claimants on his best exertions. You have, gentlemen, in my opinion, made a good choice. With a single exception, there is no one of the thousand occupations which link man to man, and render us mutually serviceable to one another, at once so interesting, so important, so universal in its application, as the study and practice of the healing art.

Wherever your lot may be cast, you will find that your characters as medical men will gain you respect and consideration; your object will be comprehended at once, "by saint, by savage, and by sage." Its utility will not be disputed, and you will find that in your professional skill, you possess a coin more current than any which the mightiest kings can issue, for it will be taken in exchange over the whole world.

Yes, gentlemen, I repeat it,—you have made a good choice, and the hour is now come when you are to justify it, and to prove that you are worthy to fill that important station which you have chosen. Doubtless, the more acute and the more cultivated your intellects, the more rapidly you will acquire professional knowledge, but some qualities there are, rather of the heart than of the head, which I consider it essential that you should possess at the outset of your career; and first of all a deep and abiding sense of religious and moral responsibility—a conscientious wish to do the thing which is right—a just estimation of what you owe to your Maker, to your neighbour, and to yourselves. On this all important subject you will receive from one whose high duty and privilege it is to guide you, far better counsel than I can hope to give; and, indeed, I should consider it presumptuous to do more on this occasion than refer you to our excellent chaplain for advice, which never makes so deep and lasting an impression as when it is given in a holy place, and falls from the lips of a holy teacher; secondly, you should possess a real love of your profession, not merely as an honourable means of attaining independence, but innately for its own sake,—for the vast stores of interesting and elevating knowledge which it will afford you the opportunity of acquiring, and even for

a still higher motive—for the great good which it will enable you, under Providence, to dispense to suffering humanity; lastly, you should possess the strong will, the firm resolve. Mankind may be considered as divided into two classes, and you may observe this division from early childhood to decrepit old age,—the leaders and the led. Who is there among us who does not remember at the school where he was educated some one boy in his class who was appealed to by the rest, who did half-a-dozen idlers' lessons besides his own; or who ruled the games and settled the disputes of those around him? That boy would, with probity, succeed in after life, whether as the soldier, the divine, the lawyer, or the merchant. Such an one is by nature an ἄναξ ἀνδρῶν—and why? because he has the strong will, the power of commanding his own purpose and his own actions, and hence of controlling those of others. Let me recommend each of you gentlemen to strive to be the leader, not the led. Nine tenths of the follies we commit, and their evil consequences, arise from our allowing ourselves to be led by others, instead of thinking and acting for ourselves. My experience tells me that you may, some of you, unless duly cautioned, find this to your cost, for unfortunately there are leaders for evil as well as for good. The idle, the dissipated, the vicious, have strong wills, as well as the industrious, the steady, and the virtuous, and they have strong allies too in the natural depravity and weakness of our nature. Thus warned, then, profit by my experience which costs you nothing, instead of buying experience of your own, haply at a very dear rate. And when you are tempted, either by your own inclinations or the solicitation of others, to do that which you did not intend, even though it be something in itself innocent, and only wrong as breaking in upon the plan which you had laid down for the allotment of your time, regard not the tempter, nor value, even at a wish, the pleasure which he importunes you to pursue, but exercise the strong will; be the leader of yourself, and I will undertake that you shall be more than this—the leader, the exemplar, the ruler, for all good purposes, of many others.

The power of giving your whole attention to that, whatever it may be, in which you are engaged, is but another, but yet a most important exercise of this strong will, and in the direct ratio of that attention will be your acquirements. Some go so far as to define memory itself to be nothing but a habit of attention, and though I will not affirm this, yet am I sure that without it memory is a useless gift. Did it never occur to you to read a passage of a book

when your mind was wandering to some other subject? your eye would scan the words, perhaps your tongue would audibly repeat them, but your thoughts were not upon them, and you found, when called to give an account of what you had read, that there was no trace of it on the tablet of your memory. Just so it is with your professional studies: if your mind is not in them, if you do not give them your whole attention while you are working, you will find out, perhaps when it is too late for remedy, that your knowledge is but superficial, and that you have yet to lay the foundation at a time when you ought already to have raised the superstructure. Whilst on this subject let me say a word or two about your recreation. During your sojourn in London, it may be for the first time in your lives, you must bear in constant recollection the specific purpose for which you have come. It is not that you may amuse yourselves with the numerous objects of interest or even of rational instruction with which this great capital abounds; much less that, under the plea of indulging in a curiosity which you may not have another opportunity of gratifying, you should plunge into that vortex of dissipation,—not to call it vice, too often its appropriate name,—in which the weak-minded votary of pleasure is so apt to become engulfed. You have come hither,—it may be at an expense which your parents, anxious for your welfare, barely contrive to afford, by devoting for a time more than your share of their means to your service,—expressly and solely that you may acquire a knowledge of your profession, and thus be enabled to repay this parental solicitude by a fulfilment of its aim. Let, then, no specious excuses for indolence disguise this important fact. Remember, that time lost at any period of life, but especially in youth,—that is, *that* time which should, according to the plan which we have laid down for its disposal, be devoted to one subject, but which is, from our infirmity of purpose or any other cause given to another,—is seldom if ever redeemed. This may seem a trite and common-place observation, and we are fain to imagine it one of those wise laws cynically delivered by the old, to scare from their innocent pleasures the young; but it is not so, it is strictly true,—and why? because every portion of our lives—every phase of our existence—nay, every day and hour, has, by a wise dispensation of Providence, its allotted use. In the complicated wheels of life each cog has its appropriate notch, and if, as they revolve, they fail to fit, the whole machine is thrown out of order. Some there are,—but I am happy to say much fewer in the present day than heretofore—none I trust in this assembly—

who do not draw a sufficiently marked line of distinction between the business and the recreation of life. They seem, in fact, to mistake the one for the other, and spend so much of their time in the acquirement of skill in some unimportant game, or in the improvement of their bodily powers, that one might suppose them to be training for a pugilistic contest, or aspiring to the honourable post of marker at a billiard table. This is what I mean by mistaking recreation for business. They toil at their pleasure with such unremitting attention, that, were it compulsory, it would be deemed even by themselves little short of slavery. Gentlemen, your time is short: well spent it is enough, but you have none to spare. Let me not, however, be misunderstood. I am far from desiring that you should not devote a due portion of it to that relaxation from study which is so necessary for your health, and even for rendering that study itself efficient and profitable. We may err on the side of unremitting toil, as well as on that of idleness. Numerous is the list of those who at our public schools and our universities, urged by an honourable but too stimulating desire for distinction, have sacrificed their health by their excessive mental exertion by day, and the imprudent curtailment of their natural rest by night. The study of medicine being more varied than that of literature or abstract science, involving not only mental reflection but corporeal action, is less likely to produce such a disastrous result. Yet even with us scarcely a season passes in which some one or more of our zealous pupils are not obliged to relinquish their studies and retire from the field, in consequence of having indiscreetly pursued them with too much ardour; neglecting to temper them with such a portion of active recreation as cannot with impunity be dispensed with.

These cautions regarding the imprudent excess either of indolence or of application in the pursuit of professional studies, naturally lead me to the consideration of its rewards, and a notice of a change which has within the last few years been adopted in our school with respect to their kind and distribution. Every one who is preparing himself for a *profession*, has, no doubt, if he rightly considers the matter, a sufficient stimulus to industry in the absolute necessity for acquiring a due knowledge of it, before he can expect or deserve to succeed in its practice; but this consideration, being of a general and prospective nature, is not always so realized in the mind of youth as to produce diligent and continued exertion. Hence, the usage of offering more present motives for zeal and industry—of setting up standards not of positive but comparative merit—

and of introducing a new element in aid of that other more distant advantage of future success. It was our practice till within the period I have mentioned, and is still the practice of the other metropolitan schools, to distribute at the close of each session, prizes of medals, or books, or surgical instruments, to those who were disposed to compete for them in the various departments of study. This additional stimulus certainly had its effect in drawing forth laudable efforts to excel; but it had this disadvantage, that it led young men to pursue some particular branch of study to the exclusion of all the rest, and, in the endeavour to obtain present distinction by a concentration of exertion upon one point, to neglect others of equal importance, forgetting the ultimate object of professional education—that of acquiring a competent knowledge in every department. A distribution of prizes, therefore, though it may answer well in a university, where each student has his particular views in life, and may have an adequate motive for following up one subject to the exclusion of all the rest, is not so well adapted to the case of the medical student, who absolutely requires a proficiency in many and various branches of knowledge before he can be even safely entrusted with so delicate and important a charge as that of the health of his fellow man. It is such considerations as these which have led to the adoption, in this hospital of an expedient which seems very aptly to meet the case. The advantages to the pupil of filling the offices of dresser and clinical clerk have been long known, and the former it has been, as you are probably aware, the custom to purchase at a large price. To hold these posts is in fact to have a foretaste of that general practice which is to form the business of life. It is to put the last touch—the finishing stroke—to education. These dresserships and clinical clerkships then, gentlemen, instead of being acquired by purchase, and made dependent on the capacity of the purse instead of that of the intellect, are the rewards which we now offer to the deserving pupil, and his merits no longer being estimated by his proficiency in any one branch of study, are considered with reference to his general acquirements in all—with reference, in fact, to his fitness to discharge, under the superintending guidance of his teachers, those duties which will in future be committed to him on his own responsibility. No one, I think, will dispute that these are the most appropriate rewards of merit which could be bestowed under the circumstances; and when it is borne in mind that our surgeons, in consenting to this arrangement, have given up what has always been regarded as an integral part of their income—a legitimate

source of emolument—their disinterested wish to benefit the pupil, even at a considerable pecuniary sacrifice to themselves, will be duly appreciated.

Although it has not been of late the practice, for the reasons I have stated, to distribute prizes for excellence in particular departments, yet I have the pleasure to state that our pupils have always highly distinguished themselves at the University of London, as the calendar will show, and that since last October they have maintained the position gained by their predecessors. Thus, in medicine, the highest honours were awarded, both at the examination for the Doctor's and Bachelor's degree, to students of this school. In physiology we were bracketed equal in the highest honours. In materia medica, both the exhibition and gold medal were awarded to one of our pupils, who likewise obtained a gold medal in chemistry, not to mention several minor honours which have been obtained by others. It is hoped that those gentlemen who come among us to-day will profit by such good examples.

Gentlemen, I beg to assure you,—and I with confidence answer for my colleagues as well as for myself,—that as we are most anxious on your account and no less so for the reputation of the school, in which our own is involved, that you should make the most of the opportunities of instruction which will be presented to you, we shall be on all fitting occasions ready to answer any questions, and to satisfy any inquiries which you may have occasion to make; and I am the more desirous of saying this, because, whether from reluctance to give trouble, and a fear of interrupting the routine of business, or from whatever cause it may arise, this is a mode of acquiring information of which pupils in general do not, in my opinion, sufficiently avail themselves. I advise you to let nothing escape your observation, and to endeavour to obtain at the moment an explanation of any thing which you do not understand. Knowledge thus obtained, when the want of it is directly felt, and the object is before us, makes a deep impression. I would instance the art of prescribing as attainable in scarcely any other way. With reference to this useful but much neglected branch I advise you to have the *Pharmacopœia* always at hand, and while the physician or surgeon is prescribing, to make yourselves familiar with the articles ordered; and here I may mention that our resident medical officer, Mr. Stocker, has just added to the meritorious services which he,—following in the steps of his late respected father,—renders to this house, by bringing out a new and improved edition of our *Guy's pharmacopœia*, with a copy of which you

will each of you be furnished. This contains much valuable matter, gathered from the accumulated experience of the past and present officers of this hospital, and it will be well, when you are advanced enough in your studies to attend to the practice of medicine in the wards, to make an especial study of this useful book, the formulæ of which will serve you not only here, but throughout the course of your professional practice.

Gentlemen, time does not permit me to say more. I have endeavoured, however imperfectly, to set before you the opportunities which this school affords for acquiring a knowledge of your profession, and I have offered you such observations as have occurred to me with regard to the spirit in which you should avail yourselves of them. The task that you have undertaken is not without its difficulties, but I firmly believe, as I sincerely hope, that by a just view of its importance, by methodical arrangement, and diligent application, you will fully succeed in overcoming them.

To conclude in the language of Holy Writ:—"See, then, that ye walk circumspectly, not as fools, but as wise, redeeming the time."

CASES OF RUPTURE OF THE BLADDER.

DR. STEPHEN SMITH, Assistant-Surgeon to Bellevue Hospital, New York, has published, in the *Journal of Medicine* of that city, a list of all the reported cases of rupture of the bladder, which he has been able to collect—making 78 cases. These he has arranged in a tabular form, including as many of the particulars given by the different reporters as could be conveniently inserted. The following is a summary of all the cases, as given by Dr. S. at the conclusion of his interesting paper, which has been issued also in a pamphlet.

Sex.—Males, 67; females 11; making about 6 of the former to 1 of the latter.

Age.—Under 10, 3; 10 to 20, 3; 20 to 30, 19; 30 to 40, 26; 40 to 50, 7; 50 to 60, 4; above 60, none; adults 16, age not given.

Condition.—Bladder distended, 30; of which 10 were intoxicated; 5, from stricture; intoxicated condition not given, 14; parturition, 4; in good health, 4; doubtful, 2; no note of 24.

Causes.—Direct violence, 48; concussion, 15; internal causes, 9; of which 4 were parturition, 4 results of stricture, 1 retroversio uteri; no note of 6.

Primary Symptoms.—Severe, 59; of which 43 were ruptured into the peritoneal cavity; 2 not involving peritoneum; 10, into cellular tissue; 3 not given. Slight 9; of which 7 were into peritoneal cavity; 2, into cellular tissue. No symptoms, 3; 2, into

peritoneal cavity; 1, indefinite. No note of 7. Inability to urinate, 28; of which 22 were into peritoneal cavity; 1, not involving peritoneum; 5, into cellular tissue. Power to void urine, 3; 2, into the peritoneal cavity; 1, not involving peritoneum. Power of locomotion, 7; all through the peritoneum. Felt a sensation as of the bladder bursting, 7.

Progress of Cases.—Severe symptoms continued in 48; of which 39 ruptured into the peritoneal cavity; 7 into cellular tissue; 2 peritoneum not involved. Severe symptoms set in, in 10; in 1, three hours after accident; 6, two days; 2, four days; 1, three days—all ruptured into peritoneum except last. In 1, power to urinate continued, the rupture being into cavity of abdomen. In 14, it came on; in 12 of these on second day; 9, being into peritoneum; 2, not involving peritoneum; 1, into cellular tissue; in 1, on third day; in 1, on fourth day. Locomotion continued in 2, both ruptured into peritoneum. Bloody urine drawn in 25; clear in 4. Symptoms were mild in 2, both ruptured into cellular tissue.

Result.—Died 73. Within five days, 39; 27 being ruptures into the peritoneum; 9, into the cellular tissue; 3, not given. Between five and ten days, 22; 17, into peritoneal cavity; 3, into cellular tissue; 2, not involving peritoneum. Between ten and fifteen days, 2; both into cellular tissue. Between fifteen and twenty days, 3; 1, into the peritoneal cavity; 2, into cellular tissue. Above twenty days, 2; both into cellular tissue; of whom 1 lived forty-two days.

Recovered, 5; 3, into cellular tissue; 1, into peritoneal cavity; 1, partial.

Post-mortem Appearances of Viscera.—External marks of injury in 2, both ruptured into peritoneal cavity. No external marks of injury in 8; 7, ruptured into cavity of peritoneum: 1, not involving peritoneum. Fracture and injury of pelvis in 15; 11, ruptured into cellular tissue; 3, into peritoneum; 1, not given. Marks of inflammation in abdomen, in 34; 27, being into peritoneal cavity; 5, into cellular tissue; 2, not involving peritoneum. No marks of inflammation in cavity of abdomen, 7; 4, being ruptured into cellular tissue; 3, into cavity of abdomen.

Post-mortem Appearances of Bladder.—Rupture into cavity of peritoneum, 50; 39, the result of direct violence; 6, concussion, or indirect violence; 4, from parturition; 2, stricture; 1, retroversio uteri. Rupture in the anterior wall of the bladder, 9; 5, being direct violence; 3, concussion; 1, stricture. Rupture at neck, 6; 5, direct violence; 1, not given. No bladder found, 2; bladder firmly contracted in 17.—*Boston Medical Journal.*

Original Communications.

A M A U R O S I S,

ACCOMPANIED BY PAINS IN THE HEAD,
TWO YEARS' DURATION—CONVULSIONS,
THREE MONTHS—EXAMINATION P.-M.—
CYST IN THE CEREBELLUM.

BY JAMES REID.

Surgeon to the Kent and Canterbury Hospital.

(Read before the Abernethian Society,
March 27th, 1851.)

F. A., aged 15, the son of a labourer, was of fair complexion and tolerably robust frame. From an early period he had suffered occasionally from headaches, which were usually attended by vomiting, but in other respects he had enjoyed good health, passing through measles and small-pox without any bad result. One of his brothers is liable to periodic head-ache of the same kind, but, with this exception, the whole family, consisting of ten, are healthy. He was known amongst his neighbours as a quick, intelligent boy, and was generally referred to in matters requiring calculation, such as the valuing articles to be bought or sold, and his decision was generally accurate. In the poor kind of education that his parents could afford him he exhibited great proficiency.

In October 1848 he perceived that he could not discern objects so well as usual, especially by candle-light; he experienced difficulty in writing in the evening at the school he went to, but, by the aid of some glasses that were lent to him, he managed to continue his work. His parents did not notice this particularly at the time. Subsequently, whilst serving as a stable-boy, he was very much frightened by the movement of a horse in the yard,—it was thought afterwards owing in some manner to his imperfect sight; and he remained at home ill from the effects of the alarm for two or three days. His mother now perceived that his sight was defective, and the boy complained occasionally of pain in his head. In the spring of 1849 these symptoms increased, and medical advice was sought for the first time. He became an out-patient of the Kent and Canterbury

Hospital, under the care of one of the physicians. Vision was then very imperfect, being only sufficient to enable him to guide himself about; the pupils were widely dilated and fixed. He suffered pain in the occiput and forehead, which was sometimes very severe. Whilst under treatment at the hospital, he was suddenly affected with excessively severe pain in the forehead, that was constant for three or four days. Nothing afforded relief, until a profuse discharge of offensive matter burst from the nose, when the pain at once remitted. The discharge, however, continued abundant for some time, and did not entirely cease, though issuing very scantily, until his death.

Mercury and all the other remedies tried had no effect upon the amaurosis. A seton was passed in the nape of his neck, but he was so soon depressed by the irritation and the discharge from it, that it was obliged to be removed.

He gradually became totally blind. For a considerable time beforehand he could discern objects indistinctly by placing himself in such a position that the light fell on the outside of the right eye, and consequently upon the left portion of its retina. The pain in his head increased as he became blind; it was most severe posteriorly, but pangs were felt through the entire head, passing towards the forehead; it was not constant, being accompanied by irregular intervals of ease, which lasted sometimes more than a day, when he would join his companions in play. He was much troubled by strange sounds and noises in his head. His intellect remained good, but his temper was much altered; he became sullen and reserved, and was very irritable. His movements were quick and sudden, but there was no peculiarity or unsteadiness in them; latterly, he became weak and emaciated, and his power of movement was affected in consequence. He always sat in one corner of the fire-place with one hand supporting the back part of his head, whilst the other occasionally rested on the forehead. In this position he would remain for the whole or greater part of a day, impatient of every disturbance, but not complaining; now and then by an acute remark showing that he noticed what was going on, though apparently observing nothing.

Eleven weeks before his death, whilst sitting in his usual position, he was

suddenly attacked by a convulsive tremor of his whole frame, accompanied by a partial loss of consciousness. After this, fits occurred at irregular intervals; he would remain free from them for one, two, or more days together, and then during one day he would have a rapid succession of attacks; or, during two or three following days, several seizures would take place. The attacks were of an irregularly convulsive character, in a few respects resembling epilepsy, but in others the spasmodic fits of severe hysteria. They commenced with severe pain in the head, passing from the occiput to the forehead; the boy would put his two hands in these situations, uttering in rapid succession the exclamation, "Oh, my head!" until apparently overpowered by the pain, and the spasmodic movements which followed. Consciousness did not, at this period, seem entirely gone; for if touched by a hand he would violently catch it, and draw it upwards by a convulsive grasp, from which it was with difficulty extricated. The spasms were principally noticed in the muscles of the face, extremities, and body; those of respiration were not apparently affected; there was no premonitory scream or expiratory sound, no foaming at the mouth, nor stertor. As the attack passed off, a very copious perspiration would burst out over the head, face, and neck, continuing for some time, and saturating the pillow. A heavy, drowsy state succeeded, from which, sometimes, he could not be roused for the remainder of the day, and often, when there had been a succession of fits, for the greater part of the following day. When this drowsy condition ceased, during a variable period he would remain curled up in his bed sullen and irritable, with the saliva dribbling from his open mouth. After these fits had occurred for a few weeks, vomiting of an obstinate character took place; mucus mixed with bile was generally ejected. The boy became thin and weak, and was almost confined to his bed, though still, when a temporary cessation of symptoms allowed him, he would crawl down to his accustomed place by the fire.

He died January 26th, 1851, sinking quietly a short time after a paroxysm of pain.

Examination 27 hours after death.—The body was rigid. The head alone

was examined. The scalp was readily separated from the skull. The bones of the head included in the section of the skull were remarkably thin, and were marked over the whole interior with depressions and ridges which resembled a model of the convolutions of the brain; some of these fossæ, near the middle, were ascertained to correspond exactly with the convolutions. The bone was so thin at the bottom of some of the grooves as readily to allow the transmission of light.

The membranes of the brain were natural; its convolutions on the superior and posterior surface were slightly flattened; both its grey and white structure were remarkably firm. The ventricles contained about six ounces of clear fluid; there was no undue vascularity; and their surfaces, together with the septum lucidum, were firm. All the central organs of the brain were explored, but no traces of disease were found. The optic nerves in their whole course within the cranium were natural. The ethmoid and sphenoid bones appeared healthy.

Between the lobes of the cerebellum, and projecting slightly in the superior fissure, behind the vermiform process, which was flattened out, there was found a cyst, the size of a small apple (about $1\frac{1}{2}$ inch diameter). When it was opened, a quantity of transparent yellow fluid escaped, and it collapsed considerably; the internal surface was uniform, presenting a soft semi-transparent appearance resembling jelly, and possessing a certain degree of vascularity; small vessels were seen ramifying in its thickness at various points, and at one or two spots a minute effusion of blood had taken place into its substance. The wall of the cyst was about a line thick, and, owing to the softening of the contiguous substance of the cerebellum, could be readily separated, leaving a ragged surface: the cerebellum was otherwise healthy. The cyst had originated in the central portion of the cerebellum, apparently in the inferior vermiform process, and had pressed into the lobes on either side, but more especially the left; with which, after it had been separated from its connection with the right, it was removed.

This case, in common with all belonging to that class of cerebral disease which includes the development and

growth of bodies in the encephalon, possesses many points of interest, but I can only briefly allude to some of them.

With regard to the symptoms, as indicating the locality and nature of the disease, we see the same want of appreciable relation between the disease and its effects upon the system which is so frequently noticed in affections of this kind, and which necessarily causes our knowledge of them before death to be so obscure and indefinite. It is true that there was sufficient to warrant the general conclusion that *some organic* lesion existed in the encephalon; but the more particular determination, upon which rational and effective treatment must depend, of *what* that lesion was, and *where* it was situated, involved questions that were at most, with our present knowledge, hidden in uncertainty, and could only be answered indefinitely. In the midst of such uncertainty, it becomes of great importance to know the true value of particular symptoms with regard to the conclusions that may be drawn from them; and herein, I think, the special interest of the present case consists. It implies also a physiological question of some importance.

It is by the earliest, and, at the same time, best marked symptom, in a case of this kind, that we are led to form an opinion of the locality of the growth; for, as the disease progresses, symptoms are added depending upon neighbouring parts becoming involved, or various changes taking place in the brain; and it is then very difficult—nay, frequently impossible—to separate the symptoms so as to point with confidence to the exact situation of the disease.

The existence of an affection of a special sense as the *earliest* symptom led me with some confidence to consider the disease as originating in the track and localities assigned to that sense, and to search for it there after death. I was somewhat disappointed to find nothing in these situations, feeling that the value of a prominent and important symptom in this relation was thereby depreciated. The symptom of amaurosis, taken in reference to the localisation of the disease in those parts where the sense of vision is thought to originate, was in this case deceptive. How, then, can the amaurosis be accounted for? This is a

question of much difficulty, and one which I cannot at present solve in a satisfactory manner. Pressure will not account for it. We know that this symptom accompanies the development of tumours, and many other diseases of the brain, where no direct communication of such disease with the organs of vision can be traced. It is usual in such cases to offer an explanation by remarking that the connection of the brain-fibres of such parts with the thalami, the geniculate or quadrigeminal bodies, will afford a solution of the difficulty; but this is merely offering, in most cases, a probable explanation which requires more extended and accurate observation to confirm or refute. It will be better, perhaps, to leave the question open than to hinder inquiry by an incomplete explanation. In connection with the frequency of amaurosis, as one of the symptoms noticed with tumours existing in or about the cerebellum, it may be mentioned that Andral, in 36 cases which he had collected from various sources, found that it existed, in a more or less complete state, in *six* only.

The symptom which pointed most correctly to the region of the disease was the severe occipital pain; but it would not be safe to depend on such evidence.

More important than the locality of the disease was the question, of what was its nature? About this there was greater obscurity, the relation between the disease and its symptoms affording no evidence upon which to form a conclusion. A conjecture was all that could be made; and, considering the age and general appearance of the patient, I surmised, from the comparative frequency of the disease, that tubercle might exist in the brain: the result proved the conjecture wrong. It is interesting, however, to observe that Abercrombie mentions a disease he met with, and regarded as nearly analogous to tuberculous disease, which he describes as cysts containing albuminous matter or fluid, in a pure state: in some cases (even of long standing) the fluid was found serous. He cites four cases,* one of which—a woman, aged 50—resembled the present case as regards some of the symptoms, its duration, and the position of the cyst. I am sorry

* Abercrombie on Diseases of the Brain, 4th edit. p. 175, Cases 90, 91, and 92.

that I could not examine the fluid contained in the cyst, owing to its escape; for the presence of albumen would, I think, have left no doubt of the identity of the present disease with that mentioned by Abercrombie. It is an interesting consideration how far these formations are simple cysts, having their structure and contents modified by the organ in or near which they are developed, or by a strumous diathesis.

The existence of tubercle is not mentioned in any of the cases referred to above. I regret that, in the present case, I was prevented making a further examination, which might have cleared up this point. The soft vascular appearance of the interior of the cyst closely resembled that observed in the sacs surrounding tuberculous matter which is undergoing softening in other parts of the body. I was forcibly reminded of this comparison a short time afterwards, when examining a tuberculous tumour removed from the back of a girl.

Briefly, then, to review the symptoms in connection with the condition of the parts after death, it may be said that the affection of vision, with the headache, probably indicated the first development of the disease: the pain in the forehead, followed by discharge of matter from the nose, was an independent disorder, originating in inflammation of the frontal or other sinuses, from cold: the occurrences of convulsions and obstinate vomiting were probably owing to the irritation from softening taking place around the cyst, and the effusion of fluid into the ventricles.

ON A PECULIAR PROPERTY OF ETHER AND SOME OILS. BY M. SCHÖNBEIN.

THE author, in pursuing his researches upon Ozone, found that he could replace phosphorus by ether, essence of turpentine, and oil of citron. On introducing a small quantity of ether into a flask filled with oxygen or atmospheric air, and stirring it from time to time, he found, after a lapse of four months, that the ether had acquired new properties. Although it did not change the blue colour of litmus, it bleached indigo, converted phosphorus into phosphorous acid, set free iodine from iodide of potassium, and reduced per- into protosalts of iron. It transformed the yellow into the red prussiate of potash, and converted sulphuret into sulphate of lead, &c., &c.—*Journal de Chimie Médicale*, Septembre, 1851. X

DR. RAMSBOTHAM'S REPORT OF CASES

THAT OCCURRED IN THE EASTERN

DISTRICT OF THE

ROYAL MATERNITY CHARITY.

[Continued from page 619.]

DURING the year 1846, there were delivered in the Eastern District of the Royal Maternity Charity, under the superintendence of Dr. F. H. Ramsbotham,

1782 Women, — of which case:

18 were twins — one in every 59 cases: of these in 6 cases both heads presented; in 11 the presentations were head and breech, or inferior extremities; and in one case one foetus presented with the breech, and the other transversely. In 5 of these cases the children were both boys, in 5 both girls, and in 8 one girl and one boy.

896 children were males.

904 children were females.

1749 were presentations of some part of the head; of which 4 were face presentations — one in every 437 births.

44 were presentations of the breech, or some part of the lower extremities — one in about every 40.9 cases; of these 12 were twins.

7 were transverse presentations — one in about every 257 births: of these 1 was a twin; 2 were premature, one of them being putrid; and the others were at full time. In all the cases the operation of version was performed, and of the 7 children two were born living, the twin being one of them.

In 3 cases the placenta was partially implanted over the os uteri — one in every 594 cases. In all of them the children were turned, 2 of them being still born; and of the mothers, 1 died of fever 14 days after delivery.

5 were complicated with dangerous hæmorrhage before delivery, *not* the result of placental presentation — one in about every 356 cases. In 4 cases the children were born naturally, some time after the membranes were artificially broken, 2 living, 2 dead, and in the remaining case, after very profuse hæmorrhage, the woman was delivered of a putrid child by turning, and died 8 hours afterwards.

In 9 cases the placenta was retained

within the uterus, either by atony, or irregular contraction of the uterine fibres, or by morbid adhesion between the placental and the uterine surfaces, so as to require the introduction of the hand for the purpose of removal—one in every 198 cases. With all these there was more or less hæmorrhage, and one woman died two hours after delivery, never having rallied from the effects of one very profuse gush of blood.

1 was complicated with alarming hæmorrhage after the natural expulsion of the placenta.

1 woman was delivered by craniotomy of her fourth child. She had always had lingering labours, and in this instance was threatened with convulsions.

1 woman was delivered by the long forceps, which were required in consequence of contraction of the brim of the pelvis; the child was still-born.

1 was delivered by the short forceps of her 13th child. She had a narrow pelvis, and had always had lingering labours; child still.

1 was complicated with puerperal convulsions, which came on before delivery. The child was living, and the mother had one fit after its birth.

In 1 case premature labour was induced by the administration of ergot, and the rupture of the membranes, at the close of $7\frac{1}{2}$ months of utero-gestation. It was rendered necessary by a contracted pelvis, and the child was born alive.

6 women died within the puerperal month, or from puerperal causes—being one in every 297 cases; only 3, however, as a consequence of labour; or one in every 594 cases.

1742 children were born living.

58 were still-born—being one in about every 31 births.

Of the Deaths,

1 was two hours after the removal of an adherent placenta. The woman lost nearly a quart of blood very suddenly, and never rallied from it.

1 was 14 days after delivery by turning, after the artificial rupture of the membranes, under partial placental presentation; the cause of death being fever.

1 was in consequence of sudden and violent hæmorrhage, brought on by passion, and ceasing suddenly. I found

her sinking 14 hours afterwards, and delivered by turning. She survived the operation 8 hours.

1 was from confirmed phthisis, four hours after the birth of a 6 months' foetus.

1 was from apoplexy, 23 days after labour, and three days after the attack.

1 was from *angina pectoris*, two hours after delivery, the woman having been subject to it for six years. There was trifling hæmorrhage before delivery, but none afterwards.

Of the still-born children,

11 were premature (of these 5 were putrid).

12 were putrid at full time, or nearly so.

14 were breech presentations, of which 3 were premature, 1 was putrid at full time, and 4 were premature and putrid.

5 were transverse presentations, of which 1 was premature, and 1 premature and putrid.

1 was delivered by craniotomy.

2 were delivered by forceps.

2 were under partial placental presentation.

3 were after dangerous accidental hæmorrhage.

1 was under lingering labour.

1 was monstrous.

1 was under face presentation.

1 was after the mother had suffered a fright.

1 was the second child of twins.

3 were at full time, or nearly so; head presenting, not putrid, nor delivered by art.

CASE OF OVARIAN TUMOUR,

WITH

REMARKS ON TREATMENT.

By W. H. BAINBRIGGE, ESQ., F.R.C.S.

SIR,—The following is the substance of a communication sent to me, descriptive of a case of ovarian tumour. As it involves points of much practical importance, I deem it desirable to publish it, together with my answer.

Having previously drawn the attention of the profession to this subject, I would take the opportunity of expressing my regret for having remained so long silent, as I feel that my medical

brethren are justly entitled to the results of those cases which have subsequently come under my own immediate care and management.—I remain, sir,

Yours very faithfully,
W. H. BAINBRIGGE.

3, Islington Square, Liverpool.

The history of her case was as follows:—She first discovered a tumor in the inguinal region, which appeared gradually to extend over the whole abdomen. She states that she has been tapped seven times, and that the necessity for the performance of paracentesis is now more frequent; the last operation having been performed only four weeks ago; that she had been seen by Dr. ———, who pronounced her disease ovarian; that the tapping never diminished the tumour on the right side. Emaciation was beginning, but her general health appears good.

I thought this a favourable case for the operation, trusting to the opinion of those who had possessed the best opportunities of judging as to the real nature of the case.

An incision was made through the abdominal coverings, and the dissection very carefully made until a white glistening substance was discovered, which certainly looked like the cyst of an ovarian dropsy. It was not laid bare more than a quarter of an inch, as there seemed to be adhesions around it. A portion of lint was introduced, and strapping applied. This was removed this morning (the fourth day); the adhesions *seemed* to be perfect. The appearance of the part was so altered from incipient granulation that no cyst could be *seen*, although we easily felt what was supposed to be the sac.

The trocar was introduced, and nearly a pailful and a half of transparent straw-coloured fluid escaped, very unlike the contents of an ovarian cyst. After the flow a fluctuating swelling, as large as a child's head, was seen at the right side, upon which the operation had no effect. This, at any rate, was contained in a cyst. I was afraid of keeping the wound open, feeling some hesitation about the case, and therefore closed it.

I wish to know whether it would be advisable to perform the operation on the tumour now remaining, the nature of which is perfectly clear; and whether, *supposing* the clear fluid evacuated

to have been contained in a *larger cyst* the operation on the smaller will have any effect upon it? If any thing be done it must be done *quickly*, as there will soon be re-accumulation, and the difficulty of diagnosis will again recur.

To W. H. Bainbrigg, Esq.
Liverpool.

My dear Sir,—I have your letter of yesterday, and agreeably to your request reply to it at once. The case you have described is very interesting, and not an unusual one. If the cyst you have tapped is really *ovarian*, the tumour which became apparent on the right side, from the drawing off so large a portion of fluid “as a pailful and a half,” is in all probability a smaller sac, and is contained within the one already evacuated; for I have never yet met with a case in which right and left ovarian dropsy existed simultaneously, nor do I think such an incident probable.

Assuming, then, that your case is one of ovarian dropsy unconnected with other disease, what you should have done was to have left open the aperture made into the *larger cyst*, when thus, by setting up a new action, and eventually a suppurative discharge, the *smaller tumour* would soon have disappeared; I am as satisfied of this fact as that I am now writing.

I do not believe that such a thing exists in reality as a *unilocular* ovarian cyst; smaller ones are always to be found within the cavity, or rather, are surrounded by the fibrous coat of the one most largely developed, and if suppuration is once set up in the latter, by the means which I have already endeavoured to explain to the profession, the former soon degenerate and slough off.

I have on more than one occasion drawn out from the original opening portions of sac of sufficient size to form the outer wall of a cyst, quite as large as the second tumour you describe—viz., “as large as a child's head.” The only question as to your present case, is, whether you have tapped an encysted or a common dropsy? whether the trocar passed into the ovarian sac or into the abdomen? It is possible, and not unfrequently happens, that an ovarian cyst may be co-existent with dropsy of the abdomen; if this should prove to be so in your case, you acted wisely in immediately closing up the wound into

the abdomen, and you did all that could be done to relieve your patient. If, however, on the other hand, the puncture was made into an ovarian sac, and the tumour which now remains is similar in character, it is a *most favourable case* for the operation and treatment I have advocated, and I should entertain no fear whatever as to the result.

I am glad you adopted the mode I recommended in the commencement of your operation—viz., by cutting down and exposing the cyst for some days before puncturing it: this procedure is, I am satisfied, the safest way of going to work, is far more simple than the plan I originally recommended, and by *thus* securing permanent adhesions of the sac to the abdominal parietes, prevents the possibility of any communication with the abdominal cavity.

A case which I operated upon in Feb. 1849 was precisely similar to the one you have now described. She was a patient of a very intelligent friend, Mr. Pritchard, of Fairfield, near Liverpool. A woman of middle age, the mother of children, and was so emaciated and debilitated at the time, that we resorted to the operation with great hesitation. She, however, recovered without even one bad symptom; and is now in perfect health, and capable of pursuing her ordinary laborious avocation—that of washing.

I have for some time past contemplated the publication of the above, and other similar cases; and your letter of yesterday strongly reminds me of the duty I owe to the profession that this publication should be no longer delayed.

The delay, in truth, has arisen not alone from the urgency of my professional labours, but also from other important matters, which have lately pressed so seriously on my time and attention as to preclude the possibility of my doing justice to a subject of such great practical importance.

If, in the progress of your ease, my further advice can be useful to you, you may command me freely.

PREVENTION OF DISORDERS AMONG CATTLE.

IN the late session of Parliament an act was renewed for another year to prevent disorders among sheep, cattle, and other animals. The original act was passed two years ago.

MEDICAL GAZETTE.

FRIDAY, OCTOBER 17, 1851.

It has until lately been held as a sacred axiom by British physicians and surgeons, that in the diagnosis and treatment of those maladies which are peculiar to the female sexual system, the utmost reserve and delicacy should be observed, even to the verge of fastidiousness. It has also been hitherto regarded by many as an equally inviolable rule of practice, that no examination of the female organs should be made, except in the presence of a third person.

These rules of conduct rigidly adhered to have at once conferred protection and dignity upon those practitioners whose duty it has been to investigate the diseases of women. While such salutary precautions formed the safeguard of the modesty and virtue of British females, at the same time they were the grounds of that confidence with which British husbands and fathers entrusted their wives and daughters to the care of their medical attendants.

It is, however, our painful duty now to confess before the world that these safeguards no longer exist. The dignity of the profession, and the virtuous bearing of woman, are alike unblushingly disregarded. Doctrines are now promulgated, and practices are sanctioned, from which decency revolts: professional character is thereby degraded, and female purity scandalized.

We do not make this statement without some personal knowledge of these gross sins against morality; and our own experience is not without ample confirmation from others, as openly recorded in medical journals, nay even in the books published and sold for the purpose of promoting such violations of the rules of common prudence. Every practitioner

who respects the rules of propriety above referred to, is daily harassed by the reckless assertions of certain *speculators* into whose hands his patients may unhappily have fallen, and by whom they have been terrified into the belief of the existence of uterine disease, which, forsooth, has had its seat only in the imagination of the *speculator* himself. Such cases we aver are common: in the majority of these, it is true, time and the judicious advice of a more upright or more clear-sighted practitioner has destroyed the illusion on the patient's mind, and left her no alternative but to attribute to ignorance or wickedness the *misuse* of the speculum.

We would not, however, on this occasion confine our observations to the debatable field of diagnosis, but, taking up a higher, and an ethical position, we would enter our protest on behalf of a very numerous section of our profession, against the custom of indiscriminately using the speculum without consultation in the cases of patients who have already been under the care of other medical men for the same illness. Confining our remonstrance to this one class of instances, we believe evidence enough could be furnished to condemn, beyond all palliation, the perpetrators of such deeds of outrage upon professional usage. It is at least an act of courtesy, if not a moral right, due to the former attendant, that unless some valid objection exists thereto, his opinion upon the case should be asked, before an instrumental examination is made. In some cases, however, we can affirm that no question is asked respecting previous treatment, and if volunteered by the patient herself, is disregarded by the *speculator*, who has to find his own account in disparaging the offices of another.

There has ever been the same tendency in medical practice to permit various remedies, plans of treatment,

&c., &c., to become "the fashion,"—each in its turn to fall into oblivion. Such is now the case with the use of the SPECULUM in the management of the diseases of women. If, however, the sentiments of a large proportion of the subjects of this class of maladies may afford any indication, we may pretty surely predict a change in the present fashion, and a return to the better practices of past days. We have heard such reflections and expressions of regret from the lips of the victims of *speculation*, as have given us cause to rejoice that we had not ourselves incurred their justifiable indignation, or thereby placed our character in the hands of the injured.

It is, indeed, more especially with regard to this latter point that we have been induced to direct attention prominently to this subject. We desire most earnestly to caution those of our less experienced brethren who may be disposed to fall into the *speculating* system as a ready means of introduction to practice, to be much and vigilantly on their guard how they submit their female patients to ocular inspection, without the protection of a consultation, or of the presence of a third person. Such precautions may, perhaps, be safely disregarded by men who have acquired a reputation for professional skill, or moral integrity; but, even such as these have before now suffered irreparably in character from the machinations of evil-disposed and perjured enemies. How much more necessary, then, is it, that those who are not so firmly placed should secure themselves against the designs of the possible destroyers of their fair names. This warning, we are well assured, is not given without reason: there are many in the profession, who, in adopting this practice, have had occasion to regret a non-observance of the precautions above given.

WE lately published the sixteenth Annual Report of the MEDICAL BENEVOLENT FUND; but we did not at the time specially advert to its financial condition, and the comparative number of cases which have annually received relief from it. It appears from a table before us, that the *subscriptions* to this fund have progressively increased since its establishment in 1835-6 to the present date, and that in the last year they exceeded by fifty pounds those of any preceding year. The *donations* have as usual been subject to great fluctuations. In 1849-50 they amounted to £629. 3s., and during the last year they fell to £188. 15s. 6d. Notwithstanding this, however, fifty cases were relieved in 1850-51, and forty-five in 1849-50.

The prosperity of this fund must undoubtedly depend on the annual subscriptions, and it certainly is a matter to excite surprise, that in a profession numbering in England and Wales at least ten thousand members, the annual subscriptions in the sixteenth year of its existence have not exceeded five hundred and forty pounds. Is it that there is indifference to the cause of charity,—that there is an objection to this mode of dispensing it,—or that the annual claims on medical practitioners from other causes are already so numerous as to prevent the majority of them from listening to an appeal, the justice and propriety of which they cannot deny? We believe that the latter, coupled with the hard struggle for the means of subsistence, is the real cause of this want of support.

The necessity for the existence of such a fund is in great part due to the over-crowded state of the profession and its pauperization by the eager acceptance on the part of its members

of ill-remunerated appointments. We know of no plan to suggest for the improvement of the fund, than a direct appeal to every practising member, to contribute annually the small sum of five shillings, or even half-a-crown. This would not be felt in the year's income of each, while it would realize a large annual subscription. When men eagerly compete with each other for a paltry stipend of twenty pounds, as the annual salary for arduous medical services in a Poor Law Union, it is not to be expected that they are in a condition to contribute freely their guineas or even half-guineas in subscriptions for a charitable object of this nature.

WE have received from the Faculty of Medicine of the UNIVERSITY OF TORONTO a prospectus of the course of medical education required from those who propose to become graduates of that University. The prescribed course appears to be simple and satisfactory. We subjoin an outline of the regulations of this Canadian University for 1851-2 :—

“The only degree in medicine conferred in this University is that of M.D., for which the following are the requisites :—

“A.—Having taken a degree in arts in this University, or in a University or College the degrees of which are recognised by this University, or having passed the matriculation examination.

“B.—Having attained the age of 21 years.

“C.—Having been engaged in medical studies not less than four years; having attended not less than two courses of lectures, each of six months' duration, on each of the subjects marked Nos. 1, 2, 3, and 4; one six months' course on each of the subjects marked 5, 6, 8, and 9; and one three months' course on the subject marked 7, in this University, or in an University, College, or School of Medicine, recognised by this University.

“1. Practical anatomy, with dissec-

tions; 2. Anatomy and physiology; 3. Principles and practice of medicine; 4. Principles and practice of surgery; 5. Materia medica and pharmacy; 6. Chemistry; 7. Practical chemistry; 8. Midwifery and diseases of women and children; 9. Medical jurisprudence.

"One year at least must be spent in attending lectures in this University; and certificates for attendance upon more than four, or less than two of the above subjects in one year, will not be received.

"D.—Having attended the medical and surgical practice of a recognised hospital for eighteen months, and medical and surgical clinical lectures during six months of the above time.

"E.—Having passed examinations in all of the above subjects.

"F.—Having performed the appointed exercises, consisting of a thesis on some medical subject, chosen by the candidate, and approved by the Dean of the Faculty, and the performance upon the dead subject of such capital operations as may be required by the examiners.*

We shall be glad to receive for publication the questions submitted to the candidates for the M.D. degree, in the examination which is now taking place.

It would appear that, under the Homœopathic system, medicines are apportioned on one scale and fees on another. The idea of a homœopathist charging for invisible and imponderable drugs is preposterous; but it is surely unfair to the public, that while medicines are reduced to a *minimum*, the charges for attendance are carried to a *maximum*. The general principle appears to be, that a man practising homœopathically should take just as much as he can get. We are not aware that any regular scale of fees has been hitherto adopted in any country, in this branch of pseudo-medical practice.

An American contemporary announces that a homœopathic physician of Boston made *nine* visits to a gentleman out of the town, for which a bill was presented of 500 dollars; and he remarks, that had one of the most talented and skilful members of the regular medical profession charged one hundred dollars for the same number of visits, he would have been denounced as an extortioner! "No order of practitioners are so proverbial for enormous charges as these homœopathists, nor are people willing to pay others so generously. A love for novelty is the only solution of this mania of paying for nothing."

There can be no doubt that, all the world over, irregular practice is far more costly to the public than regular practice. A knowledge of this fact can, however, be acquired only as the result of dearly-bought experience.

POISONING BY MUSHROOMS.

Two officers of the Belgian Cuirassiers, quartered at Bruges, died lately in that city under circumstances which ought to be made known as publicly as possible. They were in perfect health on Monday last. On Tuesday they dined in their quarters, and ordered some mushrooms dressed in some favourite sauce for dinner, of which they both partook. A few hours afterwards they were both taken ill with a horrible and agonizing colic, which before night became so alarming that medical assistance was sent for, when it was the opinion of the doctors that the sufferers had been poisoned by mushrooms. Every effort was made to save them, but without effect; after suffering the most horrible agonies the whole night, during which one of them injured himself from the violence of his convulsions, they both expired towards morning. So great was the interest taken in the fate of these distinguished officers that nearly the whole town assisted at the funeral; the crowd was immense, and most of their comrades wept bitterly. But the most fearful circumstance connected with the case is, that the poison of the mushroom is really contained in the true *Agaricus campestris*, or common mushroom, after a certain stage of growth.—*Belgian Paper*.

* FEES.—Matriculation, £1. 5s.; M.D. degree, £7. 10s.

Reviews.

A Practical Treatise on the Management of Diseases of the Heart and of Aortic Aneurism, with especial reference to the Treatment of those Diseases in India. By NORMAN CHEVERS, M.D., Civil Assistant-Surgeon, Chittagong, Bengal; Member, and formerly Member of the Council, of the Pathological Society of London. 8vo. pp. 145. Calcutta: Lepage. 1851.

THE following extract from the preface will in some measure indicate the object of this work, although it will afford little or no estimate of its scope, which is much wider:—

“The scantiness of the information which has been collected regarding the extent to which diseases of the heart and arteries in reality prevail among the native and European inhabitants of India, might tend to create a belief that diseases of the circulatory system are of such extreme rarity in this country as not to deserve a place in our literature. The facts, however, which are contained in a section of Professor Webb’s noble work—the ‘*Pathologia Indica*’—sufficiently prove that every modification of disease affecting the vascular system is liable to become established in India, both in the native and in the European. The experience of Mr. Webb convinces him that diseases of the circulatory system are very common in India. He regards carditis as a prominent feature in the general pathology of the country, and would appear to infer that acute inflammation of the heart may be even more prevalent in India than it is in Europe.

“I must confess that the statements of others, confirmed in some measure by my own limited observations and opportunities of research, lead me to adopt, for the present, the intermediate opinion—that diseases of the thoracic portion of the circulatory system are of *comparatively* unfrequent occurrence in this country, and to incline to the prevailing belief that cases of external aneurism are extremely rare.”

The practical pathological information that this work conveys is not limited to India,—it will, indeed, be found to be of service wherever men exist or medicine is practised.

The first chapter treats of the

“various adaptations in the cardiac apparatus, and of the several lesions in the lungs and abdominal organs, which are commonly attendant upon organic heart-

disease, and which are to be regarded not as mere fortuitous coincidences dependent upon accident or peculiar idiosyncrasy, but as deliberate actions resulting from the operation of fixed and definite pathological laws, and are to be anticipated as almost certain and direct consequences of the original lesion, which are only varied and modified by the really accidental complication of inflammatory affections, and of other diseased conditions, with that primary change” (p. 6).

The author sketches the chief of these *adaptations*, with the alterations in the condition of other organs which are generally found to attend them.

The second chapter lays down six leading indications of treatment, and the following chapters enter into the separate consideration of each of these. We here quote the indications as expressed by Dr. Chevers:—

“1. To diminish, if possible, the valvular or other immediate causes of obstruction.

“2. To endeavour to remove all causes of impediment to the circulation existing in the lungs, abdominal organs, and capillary system generally.

“3. To lessen vascular distension, by reducing the bulk of the circulating fluid, without impoverishing the system.

“4. To sustain or restore the power of the heart, and to reduce the capacity of its dilated cavities.

“5. To equalise the circulation, and to maintain free vascular action on the surface by regulating the temperature, clothing, &c., and to provide due access of pure and well-oxygenized air.

“6. To remove and avert irritation and excitement of the nervous system, and to procure, as far as possible, rest and tranquillity of body and mind” (p. 12).

In acting up to the first indication, the author points out that it is only in recent or acute disease that active treatment is admissible; in old-standing heart-disease the obstacle will hold its position to the end, the only chance of successful palliation lying in efforts to adapt the condition of the entire circulatory system to the existing obstacle.

Dr. Chevers holds out more encouragement as to the results of treatment in recent cases than is often entertained, but not more than the close clinical observation of acute endo- or pericarditis has taught us is perfectly justified by experience. Our own case-book would confirm the following remarks:—

"We have strong grounds for the conviction that fibrinous sub-endocardial deposits may, under favourable circumstances of constitution and treatment, become almost completely absorbed. . . . The partial diminution, and, in some instances, the entire cessation, of endocardial bruits during the decline of acute rheumatism, and the reappearance of these sounds after the damaged orifices have become altered in calibre and form by the progress of interstitial changes, is a distinct evidence of the fact that considerable absorbent power is exerted while the effused fibrin is still recent; and that it is only in consequence of the gradual accumulation of fresh deposits (probably under a continual recurrence of cardiac excitement) that obstructive disease becomes permanently established. Upon the whole, I believe that, in persons of unbroken constitutions, where the fluids are healthy and the circulation can be kept tranquil, fibrinous deposits beneath the lining membrane of the heart and arteries have a natural tendency to undergo absorption, leaving comparatively insignificant traces of their existence."

Under similar circumstances to those mentioned by the author, and by the use of the remedial measures to which he refers—viz. mercury, iodine, &c.—we have found both the endocardial and the pericardial murmurs disappear after acute rheumatic heart-disease; and repeated examinations after long intervals have proved the permanency of the cure: we have also more frequently watched the disappearance of morbid sounds, and have experienced the disappointment of their subsequent reappearance as ulterior deposition and changes of calibre took place. In some cases where morbid sounds utterly vanish, it remains, however, doubtful how far they may have been owing to an altered condition of the blood and muscular action of the heart, and the consequent relative change in the normal calibre of the cardiac orifices, rather than to any material or organic injury done to the valves by inflammatory deposit.

Dr. Chevers in the next place speaks of the effects of pericarditis, and of its treatment, the observations upon which are judicious and practical. We here, however, confine our notice more particularly to the information which they afford relative to the diseases of India. The author states that—

"Extremely prevalent as acute articular rheumatism is in Bengal, our recorded

facts illustrating the association of pericarditis and endocarditis with this affection in India are singularly few. In only three of Mr. Webb's cases of heart-disease is rheumatism mentioned to have existed: it may, however, have been operative in some of the other instances. . . . It appears certain, in two of the cases, the rheumatism was not contracted in India. The cardiac disease became fully developed and proved fatal in only one case, and this was not by any means a good typical instance, as the chronic rheumatism from which the man suffered was evidently of syphilitic origin. These three patients were Europeans. In fact, I am not acquainted with any recorded cases of rheumatic carditis occurring in a native. Such records, however, may probably exist" (p. 35).

The author cites other authorities who also point out the rarity of rheumatic cardiac disease in India, where rheumatism is very frequent.

In discussing this part of his subject, Dr. Chevers analyses and refutes Mr. Simon's theory of the source of the valvular concretions in the mere deposition of fibrine from the circulatory blood, to the exclusion of an inflammatory origin. The author satisfactorily shows the valvular disease to be of the nature of *interstitial* disease. We concur in the views of Dr. Chevers, and are somewhat surprised that a doubt should have arisen on this question in the mind of any pathologist who has had opportunities of closely examining either acute or chronic valvular disease of the heart.

The following remarks with reference to the fulfilment of the second indication—that of removing the impediment to the systemic circulation—should be borne in mind by those who are disposed to look to medicine for greater assistance than it is her province to afford, in the treatment of chronic heart-disease:—

"Confirmed organic heart-disease, absolutely insusceptible of cure as it is, and as it must ever continue to be, carries with it the redeeming point that, in its ordinary forms, the victim's life is allowed a more lengthened respite than is the case in other descriptions of destructive chronic disease with which we are acquainted,—a respite which, it is true, is fraught with some amount of suffering, great need of self-denial, and many perils; but during which, if the self-denial be rigorously maintained, while the sources of peril are carefully avoided, the suffering may be in a great

measure mitigated, and the term of existence be prolonged to a degree the full limits of which are probably far more extended than we are at present aware of" (p. 47).

Death in these cases, the author observes, results most frequently from causes of permanent obstruction exterior to the heart,—*e. g.*, "malformation of the chest and spine; organic disease of the bronchial tubes and lung-substance; large aneurisms of the aorta; stricture or obliteration of that vessel; a generally diseased condition of the entire systemic arterial tracts; organic disease of the great abdominal viscera, attended with interruption to the freedom of their capillary circulation; general dilatation of the venous system; obliteration of the great venous trunks."

Dr. Chevers devotes some space to the consideration of each of these external causes of obstruction, and the measures by which their effects may be palliated. We may observe that the author's observations are so concise and strictly practical, that they will be found of the greatest value to the clinical student as well as to the practitioner not enjoying extensive opportunities of watching heart disease.

The third indication, as stated by Dr. Chevers, is "to lessen vascular distension by reducing the bulk of the circulating fluid without impoverishing the system." This indication, the author observes, is suggested by the fact that a superabundance of blood is alone sufficient to produce disturbance in the action of a healthy heart.

The leading symptom in cases of dilatation and hypertrophy—palpitation—Dr. Chevers also remarks, is evidently owing as much to the quantity of blood which enters the faulty ventricle as to the obstacle that opposes the free emptying of the cavity.

The means by which this indication is to be fulfilled are—1, systematic restriction in the quantity of fluid and solid ingesta; 2, the production of diaphoresis; 3, diuresis; and 4, the occasional, not periodical, employment of *small* bleedings: large depletion the author justly reprobates.

In the fulfilment of the fourth indication—"to maintain or restore the power of the heart, and to reduce the capacity of its dilated cavities"—consists one of the greatest difficulties in the manage-

ment of cases of heart-disease. Dr. Chevers in the first place, adopting the views of Dr. Ridge, proceeds to combat the generally received opinions with regard to hypertrophy of the heart, the existence of which morbid condition, as commonly understood, he does not admit. The state of hypertrophy the author regards as entirely secondary, and consisting in a compensating change, the result of increased effort to overcome an obstruction. Dr. Chevers states that he never saw a heart so hypertrophied that the cavity was smaller than natural; he has never been able to discover that the heart is susceptible of being rendered too muscular and too powerful from mere hypernutrition. Obstruction, the author remarks, is the prime exciting cause of all true muscular enlargement of the heart.

"The heart, struggling against a cause of temporary or permanent impediment, is observed to become at first, and to remain for a longer or shorter period, more or less strengthened, to resist the retarding and other injurious effects of such impediment; but in proportion as the cause of obstruction or embarrassment persists and becomes aggravated, the hypertrophy or provisional strengthening of the heart evidently declines, while the essential result of this impediment—dilatation—advances; until at length the hypertrophied muscle, which has resisted so vigorously and so well, fails, either by imperceptible degrees or almost at once, and thus terminates the energetically contested, but, from the first, unequal, struggle between the fixed disease and Nature's beautiful but imperfect reparative provision against it.

"This being the almost uniform history of its origin and decline, is it rational to believe that hypertrophy can ever become excessive?" (p. 90).

Admitting the justice of the author's remarks, as giving the true history of hypertrophy of the heart *in general*, we are not disposed to return an answer in the negative to the question here put. We have had some considerable experience in pathological observation, as afforded in the wards and dead-house of one of the largest metropolitan hospitals, and our belief remains unaltered, that we have seen cases in which the state of hypertrophy has exceeded the limits of mere compensation, and even some in which the cavity of the ventricle was smaller than natural on the left side.

Dr. Chevers considers that the relation of hypertrophy of the heart to apo-

plexus is frequently the reverse of what is usually supposed,—that the violent cardiac action is sometimes an effect and not a cause of the cerebral disease. In this view we think most pathologists will concur: the opposite has we believe been too exclusively adopted.

The author traces with much care and precision the relations of hypertrophy and dilatation of the heart to various other morbid conditions, and then proceeds to the consideration of treatment, under which head he offers the following sound and judicious reflections:—

“If the principles which I have adduced be sound,—and I believe that in all their leading features they are undeniable,—they lead irresistibly to the establishment of the corollary that the administration of digitalis and other sedatives, either upon occasions of great emergency or systematically, is, *upon principle*, inadmissible in the treatment of cardiac disease, as well as in some forms of pulmonary affection.”

In this opinion we do most heartily concur; we have frequently seen harm, and have seldom seen good, arise from the administration of digitalis in chronic heart-disease. Sedatives generally, and digitalis especially, are not the remedies where power is wanted, as in cases of heart-disease:—the condition either being an obstruction to be overcome by increased action of the heart, or a diminished power of the heart requiring aid to enable it to impel the blood onwards. Digitalis in such cases is a remedy potent, indeed, for evil, but capable of effecting little enough of good. It certainly has a direct influence in retarding or depressing the force and frequency of the pulse, and this not always within controllable limits. But, as Dr. Chevers very truly remarks,—

“a slow pulse in cardiac disease is always a most unfavourable symptom. . . . The state of the pulse which is most desirable in confirmed obstructive disease is a small, firm, quick, and regular beat,—the evidence that obstruction is still compensated by a well-maintained contractile power of the ventricles, and that the cavities, still remaining of tolerably small capacity, propel the blood through its straitened course with increased rapidity. A man with slow pulse in heart-disease is liable to fall dead suddenly upon the occurrence of any depressing circumstance or cause of over-distension of the heart. It is impossible

that he can have small and strong ventricles, which are the only valid safeguards in cardiac obstruction” (p. 110).

The measures that are demanded by the fifth indication involve suggestions upon clothing, climate, &c., which are well deserving of notice—but our space is limited. We pass on, therefore, to the last general indication, in the discussion of which the author offers many very valuable suggestions, including an account of the nature and treatment of *angina*, the use of opium in this form of disease, and the influence of bodily exercise on cardiac disease.

Dr. Chevers here throws out a hint of the advantages (and we may say blessings) that would be derived from the establishment of a hospital for the reception of cases of chronic heart-disease.

In concluding the consideration of the treatment of cardiac disease, the author points out that these several indications must be observed and combined into one therapeutic system; that the adoption of either one or more to the exclusion of others constitutes a treatment glaringly defective or positively injurious. He adds:—

“If, however, in the absence of the means required in a plan of systematic treatment, confidence could be placed in adherence to any one of our indications singly, it would, I believe, be in that of gradually and systematically diminishing and keeping down the quantity of the circulating fluid by measures from which every mode of active and violent depletion was excluded” (p. 133).

The work closes with a chapter on the general principles of treatment in aneurisms of the aorta, in which the same practical knowledge of the disease and its treatment is exhibited as in those parts that have preceded.

It will be seen, from the description of this work now given, that it does not set before the student a complete and minute description of all the varieties of disease of the heart, and of the almost endless variations which refinement has recorded of their auscultatory signs; but it presents to the clinical student and to the physician a general view of the most important and most frequent forms of cardiac obstructive disease, with an admirable digest of their pathology and treatment. Although small in its dimensions, it is truly a great work.

It is the result of many years' most diligent attention directed to this class of diseases. It embraces largely every relation or bearing possessed by the topics of which it treats. Its suggestions as to treatment are evidently the fruits of experience reaped not only in the study, but also at the bedside. It is clearly written, and contains a very large amount of the most valuable practical information. It may justly claim a place on our library shelves, next to the admirable treatise by Dr. Latham; still more, it may be as frequently consulted with almost as much advantage to the practitioner and benefit to the patient. To every practical observer of cardiac disease we would say,—read this work.

I.—*Observations on the Clinical History and Pathology of one form of Fatty Degeneration of the Heart: being the substance of a Paper read before the Brighton and Sussex Medico-Chirurgical Society, Oct. 4th, 1849.*

II.—*On the Pathology and Treatment of Valvular Disease of the Heart, and its Secondary Affections: being the Gulstonian Lectures, delivered at the Royal College of Physicians, in Feb., 1851. By EDWARD LATHAM ORMEROD, M.D., &c., &c.*

OUR readers are already acquainted with the value of Dr. Ormerod's contributions to the pathology of diseases of the heart, from the previous appearance of the lecture and papers above named, in the pages of this Journal. It affords us much satisfaction to state, that the usefulness of Dr. Ormerod's researches will be henceforth augmented, since they are now republished in the separate form of pamphlets.

We have in these publications a complete history,—pathological, therapeutical, and literary,—of a large and important class of maladies. Although published in the humble form of pamphlets, these researches merit a close and diligent study by the physician. We receive them as the promise of still greater results from the labours of Dr. Ormerod, not doubting that he will industriously emulate, and ultimately in some degree approach, the well-earned fame of his relative Dr. P. M. Latham, who may be looked upon as the greatest English cardiac pathologist of the present or of the past generation.

Proceedings of Societies.

MEDICAL SOCIETY OF LONDON.

DR. MURPHY IN THE CHAIR.

Monday, Oct. 11, 1851.

THE minutes of the previous meeting, containing the following resolutions, were read and confirmed:—

"I. That the practice of homœopathy, or the prescribing medicines in what are called 'infinitesimal doses,' under a pretence that they are useful in the cure of disease, is founded in palpable error, is a delusion on the part of the practitioner, a deception on the public, and manifestly dangerous to its welfare.

"II. That the Fellows of the Medical Society of London cannot honourably hold any professional communion with homœopaths.

"III. That consequently, any Fellow of this Society who shall hereafter practise homœopathy, or who shall knowingly meet in consultation any professed homœopathist, will thereby render himself unworthy of the fellowship of this Society."

Treatment of Diseased Joints.

Mr. GAY produced a patient upon whom he had carried out his principle of treating diseased joints, and another from whom he had excised the os calcis, and preserved the use of the foot comparatively unaltered. The particular method followed by Mr. Gay in the preceding case was detailed by him in a late number of the *MEDICAL GAZETTE*.

Aneurism of the Aorta.

Mr. WEEDEN COOKE exhibited a preparation of the aorta of a patient who had died, whilst labouring under this complaint, in the Royal Free Hospital, and had been under the care of Mr. Wakley. He was an American, and had been advised a sea voyage by a physician in his own country, who imagined that the symptoms he complained of were the indications of secondary syphilis.

The President, Dr. MURPHY, then delivered the following address:—

GENTLEMEN,—A very short time before the commencement of the present session I did not suppose that I should have to address you this evening. I have been reminded, however, that my respected predecessor, your late President, had opened the previous session with an interesting

paper, and that I should follow so good an example. I have undertaken, therefore, at a very short notice, to bring forward a question of practical interest, trusting to your indulgence for the incomplete form that I am obliged now to submit it to your attention.

Before entering, however, upon the Duration of Pregnancy—the subject that I propose for your consideration—permit me very briefly to advert to one or two topics of interest to the Society. And first, I may congratulate you on the prospect that the difficulties which are in our way are likely to be removed; the clouds that threatened our financial horizon are fast disappearing; the appeal which has been made has been warmly responded to by the Fellows of this Society, and, in obedience to its resolutions, several contributions have been sent in, others are on their way to the Society's exchequer; and it is satisfactory to add that there have been only eighteen dissentients among the whole number of Fellows.

I have also been informed that your property in Bolt Court has been let to an eligible tenant; so that the prosperity of this ancient Society, and the success of those measures which have been adopted to increase its strength and to concentrate the intellectual power of our profession, will not be impeded in their progress.

Another subject has also occupied the attention of your Council, one which, in common with the profession generally, they have looked upon with much anxiety. They have felt it their duty to submit for your approval certain resolutions which they deem essential to arrest an evil which threatens to attain a dangerous magnitude. They have proposed, and you have agreed to, a decided and public expression of opinion respecting homœopathy. You have agreed, also, on the course which this Society expects from its Fellows when, in ordinary professional intercourse, they are brought into contact with the professors of this new mode of practice.

Under any other circumstances I am persuaded that it would be a work of supererogation to assure you that in all the sentiments these resolutions have expressed I fully agree; that I shall act upon them in their full extent; and, while I have the honour to occupy this chair, I shall endeavour to render them as efficient as it is in my power. It has happened, however, that my name has been brought before the profession, and of course before you, in a manner that I could not have supposed. I feel it, therefore, a duty towards you, when I find myself much misrepresented, to correct at least these mistakes, and, holding the position with which you have honoured

me, to give you every explanation of my views. I am sure, therefore, you will pardon a slight digression respecting certain charges that have been made against me, of which, if I were guilty, I should resign this chair.

I have been charged, in the first place, with meeting a homœopath in consultation. To that charge I have already replied, and I now again repeat, in the terms of your resolution, I never have *knowingly* met a homœopath in consultation; and I may further add I never will, and that for the simplest of all reasons—viz. that a consultation is impossible between two holding principles of practice diametrically opposed. I have been asked to meet them: I have invariably refused. To another, and to me equally serious charge, I have not as yet given any public reply. It is stated that I have given, in a certificate, an opinion as to the cause of a disease which could not be true; that, if true, my opinion would have the effect of injuring the reputation of a most respectable member of our profession, and that I am bound to retract the words I have used. In reply to this charge, I beg to state that my opinion has been most completely misunderstood and misrepresented. I am now in correspondence with a gentleman upon that question, and I trust to have it in my power to place before the profession, and before you, what my opinion really was as to the cause of that disease. I beg, also, distinctly to say that, in giving that opinion, I never intended that it should be interpreted injuriously to the gentleman alluded to. It could only be made to do so by straining it from its proper meaning; and I am sorry to add that, although I would most willingly have given that gentleman any explanation of my certificate necessary to exonerate him from such charges, and me from such misrepresentation, the tone of his correspondence impressed me with the conviction that he did not desire anything of the kind; on the contrary, the same spirit that influenced the accusation that I met a homœopath in consultation seemed to prompt the desire of proving that I had given an untenable opinion, and of course a false certificate. From the correspondence which I have in my possession, I distinctly state that my opinion has been totally misrepresented; and further, that, unless by the grossest misrepresentation, it could not be made to signify any want of skill, or attention, or judgment, on the part of the gentleman referred to. My opinion that a retained portion of placenta caused hydatids presumed that the placenta was morbid, that it was of necessity adherent, and that it could not be completely removed. I conjectured that the disease which rendered it so was the same

as that which afterwards appeared ; but in that opinion I may have erred, from ignorance of the whole of the facts of the case, some of which, I believe, were ascertained subsequently to my visit.

While I state this, I trust that the Society will discriminate between such an acknowledgment, and an admission that my opinion was under any circumstances absolutely erroneous,—that it could not possibly be true. In the correspondence to which I allude I have explained what that opinion was, and I still adhere to it as being quite within the limits of truth. It was formed upon the facts which were placed before me, and if afterwards other facts were obtained which would have completely changed that opinion, I can only say I had them not. My opinion may have been correct, or it may have been incorrect, but, whether it were the one or the other, I assert that it conveyed no imputation injurious to any one's professional reputation. I feel perfectly conscious, therefore, with regard to both these charges, that there is not a shadow of foundation for either of them.

I trust the Society will pardon this allusion to a merely personal matter. I should not have thought of trespassing upon them, did I not feel it a duty to remove from their minds, as far as it is in my power to do, the erroneous impressions that have been in circulation. With regard to homœopathy itself, I have the same opinion of it now that I always held : I believe that the professed homœopathist, like the professed mesmerist, the professed hydropathist, pursues this practice with the same object and on the same principle as the professed charlatan who sells his cures under a thousand disguises. With such men, homœopathy becomes a form of quackery the more dangerous because it assumes the garb of a science. The quack who sells his pills or his mixtures is comparatively a harmless person,—those of the public who have faith in what he tells them are alone deceived ; they believe in his secret cure on the faith of his word or his advertisement, and if they please to act so foolishly, they do so at least with their eyes open. They are asked to trust a secret remedy, and they do so. But the charlatan who entangles them in the intricacies of a pseudo-science, who bewilders them in the subtleties of the absurd dogma, “*similia similibus curantur*,” and presents to them his infinitesimal dose as the ultimate result of his scientific inquiries,—such a man is calculated to do a much greater evil just in proportion as the scientific garb he assumes is calculated to deceive even the judicious and reflecting.

When, therefore, you find the professed

homœopathist, surrounded by his publications, by his dogmata, his infinitesimal pharmacy as infinitesimal in mind as in matter, in science as in atoms,—when you find such a one waging war against legitimate medicine—when further you find them undertaking to cure the most violent inflammations, the most dangerous fevers, and even surgical accidents, homœopathically,—I would say,—

Hic niger est, hunc tu Romane caveto.

But, while I hold such sentiments, I do feel that much caution and great discrimination should be observed in affixing such a title to a professional brother. I feel that it would lead to an abuse fully as great as homœopathy itself, if this stigma were affixed without just cause. I can well imagine that there are in the profession perfectly honest members, who think that there must be something in homœopathy worthy of consideration ; that in the heap of chaff some valuable grains of wheat may be found which have not hitherto attracted observation, who are embarrassed by facts difficult to explain, and who may be disposed to order unusually smaller doses than they have hitherto been accustomed to prescribe, and consequently may look like homœopathists. I should be disposed to exercise great caution in putting such men in the same category as the former. I do not think that such an act would in the least degree aid us in suppressing homœopathy. On the contrary, I would fear that the operation of another principle, one that acts powerfully on the human mind, would be the means of giving it unexpected support. An obstinate and dogged resistance to an act of injustice might make the mere inquirer into what homœopathy is, its warm advocate ; it might make him do what perhaps he never intended, and give the weight of his name and his influence to the abuse that he would have otherwise discountenanced. The spirit of inquiry natural to the human mind renders these men anxious to ascertain the true cause of the benefit received, and whether they adopt the belief that homœopathy is only another name for an expectant treatment,—for in fact doing nothing,—or whether they think that minute doses of medicine frequently repeated are more efficient than a full dose of the same agent ; in either case such men cannot be considered in the light of quacks. They should not be confounded with the homœopathic professors to whom I have alluded. I may err altogether in my judgment, but I cannot think it either just or prudent to hold up to public reprobation men equally educated as we have been, who have through life observed the same honourable course that we have

marked out for ourselves—being in every respect worthy members of our profession, because they may happen to order an unusually small dose of medicine. I should rather say, wait until you have stronger, more decided, clearer evidence of the homœopathic dementia; until you find an open acknowledgment of the principles of homœopathy as the foundation of their practice, and an admission that they have become converts to these novel doctrines. Then is the time for us to act with decision and effect.

I feel it the more necessary to urge upon the Society the importance of combining prudence with decision, caution with energy, because it is obvious, that in consequence of the spread of these false doctrines, and the manner in which they are supported, the profession is excited to the most intense degree. They are just in the same position with regard to medicine as other bodies of men have been in respect to religion; there is a danger that they may be blinded by their zeal, and, in their desire to suppress this heresy, may most unwittingly use a means that only gives to it strength. No doctrines, however untrue, were ever yet suppressed by persecution, or by any procedure that in the least degree approaches to it. On the contrary, if we would give to falsehood the same aid in its propagation that providence in its wisdom found necessary for truth, we have only to make a few martyrs, and the thing is accomplished. If we make one mistake in this respect,—if gentlemen who have hitherto maintained a high reputation are unjustly held up to public odium because they were guilty perhaps of ordering an unusually small dose of medicine—we certainly do not convince them of their error, but we do what appears to me a great deal worse, we give the homœopathist, the professed dogmatist, the apostle of a new faith in medicine,—that is, to turn every chemist's shop into a pocket medicine chest,—we give him a most powerful aid, when we, as it were, authorise him to claim such men as their supporters.

In making these observations I wish not to be misunderstood: I do not mean to shelter the secret homœopathist, or to say that any such should not be called upon at once to declare their faith, to make their election: my object is rather to caution the Society against the abuse that might be made of its honest intentions. You know that professional character is the only property that a professional man has; deprive him of that, and you deprive him of everything. If this, then, be true, it appears to me that we should be jealously alive to every attempt that is made to single out any of our professional brethren as objects

for attack or accusation. We should be perfectly clear that the charge is true, and that on the clearest evidence, before we decide against him.

I think also that we should be cautious in acting upon charges that may be contained in the public journals. The accusation that is made in a public journal, whether medical or otherwise, is founded upon evidence in possession of that journal alone. The print has it in its power to bring forward just so much of the evidence as it pleases, and no more; it may tell the truth but not the whole truth, and, consequently our brother may be accused, tried, and found guilty, on *ex parte* evidence alone. It may be said that the accused has the power of reply—the press is open to him, he can defend himself. This is certainly a very pleasing fiction, of which any one who ever attempted a reply to a public journal must have a pleasing consciousness. Imagine for a moment a sensitive author replying to the critiques of the *Foreign Quarterly*, or an unfortunate Irishman answering the sarcasms of the *Times*, and you may form some idea of the power of reply. The public are well aware of this, and generally appreciate correctly the castigations of the public press. It is only when these attacks are recognised by societies, whether public or private, that they become serious, and are calculated to do mischief. While, however, I think that caution is necessary, lest we might sanction or give credence to a groundless charge, I do not complain because a journal may please to adopt such a course. The liberty of the press is sacred in this country; and although an editor may use that liberty a little too freely,—although after his own peculiar fashion he may hold a solemn court, and condemn you without a hearing,—still the injury, although great, may be pardoned for the sake of the object he has in view. The honest editor (I do not speak of those that may have sinister motives) wishes to drive the money-changers out of the temple of medicine, and, not being the fac-simile of his great Master, he lashes right and left without regarding whom he may strike. If, unhappily, the innocent are found in company with the guilty, they receive the same chastisement. I do not complain of this: we must be more careful with whom we associate: but I do feel strongly on the duty of all public bodies and public societies (who are the guardians of our profession) to act with great caution and discrimination when such charges form the basis of their proceedings.

I trust the Society will pardon these observations. I have taken the liberty to express my sentiments freely on this im-

portant subject. I should not have thought of thus trespassing upon their attention had I not a painful experience of the mischievous effect of false accusations,—did I not know the injury that must be done to the profession if its members are liable to such charges on trifling grounds,—if I did not feel sure that by these means we were giving to homœopathy an importance that it does not merit; that we were helping it to a position which I trust it may never attain,—I should not have ventured thus to address you.

When I commenced my remarks I intended them to be brief: I find, however, that they have occupied more of your time than I had anticipated. I must not therefore trespass on the space allotted to me by a lengthened discussion on the duration of pregnancy. I have another reason also for not wishing to do so at present. The duration of pregnancy is a subject which I wished to bring before the Society at a much later period, when it would be in my power to arrange the facts that are in my possession, and embody my views more perfectly than I can now do. On a future occasion I trust to be able to bring this subject again forward. At present I shall submit to the Society a very brief outline of the method that I have pursued, and its results in the attempt to resolve this difficult problem; and I do so the more willingly because it is so completely in the power of others by adopting the same method to assist in its solution.

There are two questions to decide. Is the duration of pregnancy a fixed or a variable period? and if we decide that it is variable, what are the limits of its variation? You are aware that the most usual mode of calculating the term of pregnancy is by dating from the last appearance of the menses to the time of delivery; the gross result thus obtained is afterwards corrected by deducting as many days as is supposed necessary to avoid error as the exact time of conception. Those who believe that conception may take place at any time between two menstrual periods, generally deduct half the period, taking the middle point as the commencement of gestation. If it be 28 days they date from the 14th day after the last catamenia; so that the possible error is diminished one half. Those who assume that conception only takes place at a menstrual period date either from the last catamenia or that which should have followed only for conception. This estimate is again compared with the period of quickening, and thus a result sufficiently accurate for ordinary practical purposes is obtained. This method, however, fails in the precision

necessary for legal evidence, and hence the profession have anxiously sought for another mode to determine the exact time that conception occurs. Some women are known to have peculiar sensations at the time of conception, by which they are conscious that it has taken place. Dr. Montgomery, in his valuable work on the signs of pregnancy, relates several such instances, which fix the duration at 280 days. Again, certain cases fall under the notice of those in extensive practice by which the date of conception is determined by the date of intercourse; that is, the evidence of a single intercourse being certain, the time of conception is equally certain. Sir Charles Clarke and others mention such instances, and give 280 days as the period of pregnancy. Hence, on the strength of this testimony, many are disposed to look upon the duration of pregnancy as a fixed period,—viz., 280 days. I am, however, disposed to doubt the accuracy of this assumption, because these cases form a very small number, and, if the rule were different, might easily form exceptions to that rule without in the least disturbing it. Hence it has appeared to me that statistics might be applied to the solution of the question, and for this purpose I have availed myself of the opportunities afforded me to endeavour to resolve it, or at least to aid in its resolution.

Some years since, when forming a registry of obstetric cases at University College Hospital, it occurred to me that it might be made a means of determining this question, when a sufficiently large number of cases were obtained. The following method was adopted:—When a letter for attendance was applied for, an inquiry was made as to the catamenia, the age of the applicant at its commencement, its period, and its last appearance. The applicant could have no idea of the object of these inquiries, and therefore could have no motive for deception. With regard to the last question, its cessation, some could only give the month, some were too irregular to date from, and some were precise as to the date. Those that were irregular were excluded: for instance, some who were nursing either had no change or a very irregular one; others had been always irregular before pregnancy, and therefore could not be depended on; and again, with some the catamenia had evidently continued after conception. Such cases being omitted, those that remained were noted; and when labour took place, the time of delivery was also recorded. The interval between the two dates gave what might be called the gross duration of pregnancy. The period so obtained was afterwards corrected so as to make as near an approach to accuracy as possible.

On a former occasion, when drawing up a report of the obstetric practice of University College Hospital, a table of 186 cases was formed, in which the duration of pregnancy is given. In those cases the corrections were made in the following manner:—If the period exceeded 280 days, and the woman had given the exact date when she was last unwell, an inquiry was made as to the regularity of the catamenia; but, to avoid error, the whole menstrual interval was deducted from the gross amount. For instance, if the whole duration were 328 days, and the interval of the catamenia 28 days, the last number was subtracted from the former, leaving 300 days as the true period. It was assumed that the woman might be wrong as to the exact date, and therefore it was safer to consider that conception occurred just before the catamenia which had been arrested. In the present inquiry a method slightly different has been adopted. 280 days is assumed to be the true period of pregnancy, and every case that can be made to fit is included under the table of 280 days; if it cannot, the correction is made thus:—When the month only is given, the date is taken from the last day of the month; if the precise date is given, it is assumed to be correct, and the menstrual interval being deducted, the result is presumed to be accurate. For example, if from the last appearance of the catamenia (say April 10) to February 10, include 306 days, the true duration of pregnancy would be $306 - 28 = 278$ days: thus reducing every case of extended pregnancy to its lowest number consistently with truth.

Four tables have been formed, containing collectively 965 cases.

1st. Those cases in which the duration of pregnancy is above 280 days.

2d. Those that are exactly that period.

3d. Those between 260 and 280 days.

4th. Those below 260 days.

The first table (above 280 days) is by far the most important, and includes 303 cases.

The second (280 days) 378 „

The third (between 260 and 280 days) 201 „

882

The fourth (below 260 days), which must be considered premature deliveries 83 „

Making altogether 965 „

These tables give support to those formed some years back, in proving that the duration of pregnancy is not a fixed period, but, just as in the lower animals, it varies within certain limits. What those limits are is the important question to determine. I

have taken 260 days, or 37 weeks, as the shortest period, because I have attended cases that have given birth to mature children at that period. I do not wish as yet to speak absolutely as to the longest period, because the first table that I have formed is yet under examination, and requires the corrections that I have alluded to. At some future opportunity I shall bring before the Society the results in a more perfect form. At present, I shall only quote an instance of very protracted gestation which I think may be considered as accurate.

Mary Abbot, æt. 40, living at 39, Gough Street, Gray's Inn Road, applied for a letter to the hospital, January 3, 1849. The catamenia had commenced at 14, and continued regularly every four weeks. She was pregnant of her fourth child, and the menses appeared last in the month of March 1848. She states that whenever pregnant, "she always feels ill, the morning sickness being very bad, and a death-like feeling of faintness and sinking frequently recurring" by which symptoms alone she has always been able to say she was pregnant. She perfectly remembers her last pregnancy, and the particulars respecting it. The menses ceased in the beginning of March, or, she says, "more properly in the last days of February." It was not more than a month from this period that she began to be sensible of the same feelings of faintness and sickness habitually present in former pregnancies. It was accompanied with much pain in the region of the uterus, and a sense of weight and bearing down. Having applied for advice, she was found to suffer from inflammation and ulceration of the womb, for which she was treated. The symptoms which she was accustomed to attribute to pregnancy were therefore rendered doubtful; it was left undecided, the woman still suffering the same sickness and faintness, until August, when she felt the child distinctly move. At the same moment she felt very faint, and nearly fell down: "she thought she was going to die." From this time the progressive enlargement left no doubt that she was pregnant, and she was very much surprised to find that she was not confined in December. Her neighbours made sport of her, and had their jokes, telling her the child was waiting for its teeth, &c. This made her very unhappy. At length she was confined, March 17, 1850, of a girl, to her great relief, as she actually believed that she would never be confined. In this case, therefore, if conception be dated from the last day in March, the duration of pregnancy would be 351 days; and if we deduct the catamenial period, 28 days (which in this case would evidently be erroneous),

still the duration would be $351 - 28 = 323$ days. Compare this with the time of quickening (August). From the last day in August to the 17th March would be six months and a half; or from the middle of August, seven months. Pregnancy was therefore prolonged two months longer than is usual after quickening.

There are other cases that I might quote in which pregnancy was extended three weeks and a month beyond 280 days; but I fear to trespass further on your attention. I shall only say that these results, as far as they have gone, convince me that the period of gestation is not fixed; and I have great reason to think that it sometimes extends much beyond the term that is generally supposed.

I beg that the Society will pardon this imperfect paper—imperfect because I did not expect that I should have to address you thus early; but, being called upon, I did not hesitate to do so, trusting to your uniform kindness to forgive whatever you might see amiss.

NEWCASTLE AND GATESHEAD PATHOLOGICAL SOCIETY.

June 1851.

Mr. MITCHELL read the notes of a case of
Mollities Ossium,

in a woman aged 34, an inhabitant of the Ridsdale Ironworks, a widow, the mother of three children, and of scrofulous aspect. She enjoyed good health until six years ago, when she had her last child, shortly after which she began to feel pains in her sternum, with weakness there. The sternum gradually became prominent, and is now almost angular at its centre. About a year after she became unwell, she was attacked with pain and weakness in her back, at first in the lower cervical and upper dorsal vertebræ, the spines of which soon began to curve backwards, and shortly afterwards in her thighs and legs. Two years ago she was compelled to walk with the help of crutches, but for the last year has not been able to leave her bed. The thigh and leg bones are now almost bent double upon themselves, but by pressure or extension can be straightened again. When they are brought into their natural position she experiences great pain, and cannot bear them to continue long in that posture. The bones of the pelvis and fingers are also more or less affected with the same disease. The disease appears to have some connection with a scrofulous taint, as her brothers

have died of phthisis. Her appetite is bad, pulse 90, tongue clean, secretions natural except that the urine is pale and very phosphatic. The treatment consists principally in administering nourishing diet, with tincture of iron and occasional aperients.

Dr. HUMBLE read the following

Report of the Cases treated in the Newcastle Fever House during the last year.

HAVING, during the year ending 30th April, 1851, had charge of the Fever Hospital, owing to the continued indisposition of Dr. Bulman, I have much pleasure in being able to submit the following report of the cases admitted under my care:—

They numbered in all one hundred and nineteen; of which one hundred and seventeen were cases of continued, and two were cases of scarlet fever. They occurred chiefly during the winter months, seventy-seven having been admitted during the five months commencing with December last. The deaths also, with one exception, occurred during the same period. Of the cases of scarlet fever, one was mild, but the other was of the congestive character, requiring the free administration of stimulants in order to combat the typhoid symptoms which early made their appearance.

The cases of continued fever (sixty-seven male, and fifty female) were ushered in with the usual symptoms of the disease, such as languor, lassitude, loss of appetite, chilliness frequently passing on to shivering, headache, &c. Nine of them were mild, not having presented urgent symptoms in any part of their course. Thirty-four (fifteen male and nineteen female) were characterised by severe aching pain in the bones, in addition to the ordinary symptoms, and by a relapse which took place in eight on the 13th day, two on the 14th, twenty-two on the 15th, one on the 17th, and one, to be afterwards alluded to, on the 18th day. In general, this came on after convalescence had commenced, and it did so in spite of every precaution which could be devised against it. A family of six were admitted consecutively; and those first seen having each had a relapse, an opportunity was afforded of watching the others with more than usual care, in order to prevent the occurrence of anything calculated to produce it. One of them (a boy) became convalescent, and was ordered to keep his bed until the usual period of relapse should have passed over. This was accomplished with considerable difficulty, as he felt himself perfectly well; but, on the evening of the 15th day, the relapse, or, as it might be called, the second attack of fever, came on. In others, admitted from the same neighbourhood, in whom

the first attack was unsubdued on the 15th day, a very sudden and well-marked exacerbation of all the symptoms occurred. These cases bore a strong resemblance to those met with during the extensive epidemic which prevailed in 1847-8; and a considerable portion of them occurred during the winter months, when a large importation of Irish, fresh from their native wilds, seems to have taken place. These poor creatures, many of them totally incapable of speaking anything but Erse, were huddled together in great numbers in a few lodging-houses situated in the lower parts of the town; and it was only by the timely separation of each case as soon as it showed itself that the disease was kept in check, and prevented from assuming a more formidable appearance. In one family fever seemed to have been occasioned, or at any rate aggravated, by the want of the common necessities of life; two of the children, aged nine and eleven years, presenting the appearance of extreme old age, with all the other symptoms so graphically described as belonging to the famine fever of Ireland. Four cases, after presenting the usual symptoms of continued fever for several days, took on the character of regular ague—in one after twelve days, where the type was tertian, and in three after ten days, in which it was quotidian.

In the great majority convalescence was gradual; an improvement in the abdominal excretions, a diminution of the frequency of the heart's action, with a corresponding decrease of heat of skin, accompanied by a gentle moisture on the surface, being its usual concomitants: in fact, in six only was it suddenly ushered in, and in these the forerunner was excessive diaphoresis. In giving a further account of the cases, I shall proceed with an analysis of the various groups of symptoms which presented themselves:—

1. *Symptoms affecting the brain and nervous system.*—In ninety-three of the cases headache was present with more or less severity: in some it amounted merely to uneasiness, accompanied by vertigo or tinnitus aurium, but in general it was complained of as being very severe. Epistaxis, followed by considerable relief, occurred in three of these cases. In twenty, delirium was present: it was generally of the low, muttering character; but, in a few instances, the patients were so violent as to require the use of mechanical restraint. Sleeplessness was found in six; complete deafness in six; and, in many cases, confusion of ideas, with a tendency to stupor, were the prominent symptoms. No case of convulsions occurred: subsultus tendi-

num was also rare, but general tremulousness was frequently met with.

2. *Symptoms affecting the respiratory and circulating organs.*—The respiratory functions were much interfered with, especially in the more severe cases; for, in addition to præcordial oppression, which was present more or less in all, the acts of inspiration frequently amounted to thirty-eight or forty in the minute, and this without any accompanying lesion of the mucous membrane of the bronchial tubes or of the substance of the lungs. Thirty-six cases (twenty-two male, and fourteen female) suffered from pain of chest and cough, accompanied by mucous expectoration, and the ordinary rales indicative of the presence of bronchitis. In several these symptoms had existed for some time previous to the accession of fever, while in others they came on after admission to the hospital. Pneumonia was found a complication in three cases: these were all male, and exhibited the usual symptoms of the disease in addition to those of fever. One case proved fatal: he was in a dying state when admitted, having been previously ill for a month. In each of the other cases the inflammation was confined to one lung: one of them was accompanied by delirium, but both eventually recovered. One case of pleurisy was met with in a man who had led an irregular life, and whose constitution was in consequence much shattered: he, however, recovered. The pulse presented great variety both to quickness and strength: in a few it was not much accelerated; but in general it averaged from 100 to 130. In one instance it was extremely irregular, but ceased to be so with the subsidence of the febrile symptoms, which took place suddenly on the occurrence of copious perspiration. It continued regular during the remainder of his stay in the hospital, although he had a relapse, when it rose in frequency to 120 in the minute. In the worst cases it reached 140, and in one it amounted to 152; the respiration at the same time being 28. These symptoms were accompanied by a copious eruption of the rose rash, and the case eventually did well.

3. *Symptoms affecting the digestive and abdominal organs.*—The teeth in eleven cases were thickly coated with sordes; the tongue in 108 was more or less furred from the commencement of the attack. In the relapsing cases the fur was generally moist and white, or rather a dirty brownish-white, becoming darker as the disease progressed: it was also occasionally adhesive. In fifty-five the tongue was also parched; in nine of these the dryness was confined to the centre, the edges being at the same time moist and whitish, leaving a dark-brown

streak extending backwards from the top. In two it was red, smooth, and dry, never presenting any fur whatever: in the nine mild cases already mentioned it continued moist and clear throughout.

Nausea and vomiting proved very troublesome in twelve cases: these symptoms were generally accompanied by epigastric tenderness: hiccough was present in the advanced stage of two cases: abdominal pain, of a gasping character, and unaccompanied by tenderness, was met with in a few instances; pain and tenderness in the right iliac region being complained of in six cases. In forty-seven the bowels were confined on admission; in forty-eight they were naturally moved; and in twenty they had been previously acted on by medicine. In four diarrhoea was present; and in nine it occurred in the more advanced stages of the disease. The evacuations were observed to be dark-coloured and offensive in sixteen, and light-coloured in five of the cases; but for the most part they were very slightly disordered, departing little from the natural appearance. Seven suffered from hæmorrhage from the bowels: in four this accompanied diarrhoea; in two it occurred with great violence without any apparent connection with existing symptoms; and in one it seemed to be dependent on extensive typhous disorganization of the small intestine. The patients having been generally able to give notice of their wants to the attendants, involuntary discharges of fæces and urine were met with in only four cases, which all eventually recovered. The urine was usually found more scanty than natural; but, excepting in three cases in which jaundice supervened, and in which it was loaded with bilious matter, it did not present any deviations from its normal condition calling for especial notice. These attacks of jaundice were all found among the relapsing cases, and were not severe; the stools as well as the urine being loaded with bile throughout their course. In one instance it was accompanied by diarrhoea; and menorrhagia had also existed for thirteen weeks previous to admission. Another case of menorrhagia was met with, which also belonged to the relapsing class; and although the hæmorrhage was so severe as to place her life in imminent danger for some days, it did not interfere with the usual relapse further than to protract its appearance to the 18th day.

4. *Symptoms affecting the surface of the body.*—The skin in the great majority pungently hot and dry; in a few it did not exceed the natural temperature, whilst in others it was hot and moist during the continuance of the febrile symptoms. In five the rose rash was a prominent symptom: in four of these it was of a bright rose-

colour, and in one of a more dusky red; in three it was accompanied by redness and soreness of the internal fauces; and in the whole number by general tremulousness and delirium. In one case alone was there an eruption of petechiæ observed, and sudamina were not noticed in a single instance, although the skin was always carefully examined. Two patients had sloughing of the skin and soft parts covering the sacrum,—one superficial, and the other deep.

5. *Ages, mortality, and duration.*—Of the males, there were—aged sixty-one, one case; fifty, and under sixty, four cases; forty, and under fifty, nine cases; thirty, and under forty, seven cases; twenty, and under thirty, twenty-five cases; ten, and under twenty, seventeen cases; and under ten, three cases: in all, sixty-six. Of the females, there were—aged seventy, one case; sixty, and under seventy, two cases; fifty, and under sixty, four cases; forty, and under fifty, three cases; thirty, and under forty, three cases; twenty, and under thirty, twenty-three cases; ten, and under twenty, sixteen cases; and one case at nine years: fifty-three in all. These last include the two cases of scarlet fever between the ages of twenty and thirty.

Four males and two females died: of the former, one died at the age of fifty-three, one at forty-three, one at twenty-seven, and one at nineteen years; of the latter, one died at fifty, and the other at twenty years.

From these statements it appears that the greatest number of cases took place between the ages of ten and thirty years, eighty-one out of one hundred and nineteen having occurred during this period, and that the average mortality was greatest between the ages of fifty and sixty.

Of the deaths, three occurred from idiopathic fever, and three from complications; one with bronchitis, one with pneumonia, and one with peritonitis.

The average duration of the fatal cases was twenty-three days, and of their residence in the hospital ten days. The average duration of the cases which recovered was thirty-four days, and of their sojourn in the hospital twenty-seven days. A post-mortem examination was obtained in only two of the cases, in one of which there was found congestion of the membranes of the brain, with serous effusion under the arachnoid, at the base of the brain, and in the lateral ventricles. The mucous membrane of the ilium, and also of the colon, was much congested, but no ulceration was apparent. In the other case most extensive typhous disorganization of the mucous membrane of the ilium had taken place; twenty-eight ulcerations, of varying depth, having been found scattered over a surface

of five feet eight inches of the intestine, beginning at the ilio-colic valve. The mucous membrane at the commencement of the colon also participated in the disease, being ulcerated in the immediate vicinity of the valve, and deeply congested to a considerable distance. The diseased intestine was exhibited at the last meeting of the Society, and a more lengthened account of the case will be found in the proceedings of that evening.

6. *Treatment*.—As a preliminary step, each patient who could bear it was on admission placed in a warm bath for a few minutes; this had the effect not only of cleaning the skin, an indispensable requisite in the class of patients admitted, and thereby favouring the production of diaphoresis, but also of relieving the aching of the bones so frequently complained of. After this, the administration of a brisk purgative in the first instance, with the further exhibition of mild laxatives as required, the continued use of mild diaphoretic medicines, and the occasional application of blisters and leeches, formed the general basis of the treatment in the earlier stages of the disease; the careful exhibition of ammonia, wine, with quinine and other tonics, being had recourse to at the more advanced period. In fifty-two cases, in which stimulants were necessary, ammonia was given alone in four. Wine was given three times a day in thirty-three, and every three hours in fourteen. In the latter cases the two were generally combined: brandy was only found requisite in two cases. The lancet was not had recourse to in a single case. Bleeding had been performed in several instances previous to the admission of the patients, but with no good effect, the convalescence, when recovery was the result, being invariably more tedious than when an opposite plan of treatment had been pursued. In one of the cases of pneumonia the sufferer had been bled to the extent of sixteen ounces by a man whom he called “a kind of a quack,” being, I have reason to believe, an Irish tinman, who twice attempted to bleed a patient subsequently admitted, but failed in the attempt, as “the blood would not come.” The case which proved fatal owing to extensive ulceration of the mucous membrane of the ileum had been bled previous to admission, and I am induced to think, from a comparison of this case with one of greater virulence in the hospital at the same time, and with others which have come under my notice from time to time, that bleeding in cases of this kind is injurious, either by furthering the deposition of the typhous product in the mucous membrane, or by weakening the powers of the system, so as to render it unable to guide

the process of ulceration consequent upon such deposition to a healthy termination.

When the tongue was found loaded with a dense dirty-white or brown fur, small doses of blue pill with ipsecacuanha were given three times a day, with the effect of rapidly improving the alvine evacuations, of cleaning the tongue, and of inducing a simultaneous subsidence of the febrile symptoms. In two of such cases slight ptialism was produced, but in general it was not found necessary to push the remedy so far.

Great benefit was experienced from frequent sponging with tepid water and vinegar whenever heat and dryness of the skin existed, a gentle moisture being thereby induced.

In the treatment of headache, the steady and constant application of cold to the head, in conjunction with the remedies already specified, was found of great benefit, and it was rarely found necessary to have recourse to leeches; in nine of such cases only were they used. In one of the cases of delirium, which was so violent as to require the use of the straight-waistcoat, great benefit accrued from the frequent repetition of the cold douche, with, in the intervals, the constant application of cold cloths: in fact, this, with the exception of a blister to the nape of the neck, and attention to the state of the bowels, was the only treatment the case required, and convalescence commenced on the fifth day subsequent to his admission. This may serve to illustrate the treatment in similar cases, the same plan, with slight variations according to circumstances, having been invariably adopted. In cases in which sleeplessness was present great benefit was derived from the cautious exhibition of anodynes.

The complications with bronchitis were treated with the potassio-tartrate of antimony and blisters in the early stages, followed by ammonia, with decoction of senega when necessary; in a few instances it was deemed advisable to preface the use of the last-named remedies by the exhibition of emetics, in order to remove any accumulation of mucus existing in the bronchial tubes. The remedies used in the complications with pneumonia were blisters, followed by a combination of calomel, opium, and antimony, in addition to the ordinary febrifuge measures.

The cases of violent hæmorrhage from the bowels occurring without typhoid symptoms were relieved by frequently repeated doses of acetate of lead with opium, and, in the case supervening upon symptoms of typhoid ulceration of the small intestine, tannic acid was given in ten-grain doses every three hours, with the effect of almost

immediately arresting the hæmorrhage. In this case diarrhœa came on, and continued for a length of time, but was ultimately subdued after the employment of various astringents. The abdomen had been blistered, and the free exhibition of wine in order to support his strength had been resorted to; the patient at the same time taking daily a solution of the chlorate of potash. The bowels were afterwards kept open with doses of calomel and rhubarb; the typhoid symptoms gradually disappeared, and he eventually recovered after an illness of upwards of thirteen weeks. The chlorate of potash was also given in four cases exhibiting the worst symptoms of typhus, with great benefit in each instance.

In the case complicated with menorrhagia so severe as to threaten life, the tannic acid was given, and after a very few ten-grain doses the hæmorrhage entirely ceased. In such cases this remedy appears to me to possess great advantages over the acetate of lead, which is liable to produce deleterious effects if continued for any length of time.

To sum up the results of the year's practice, it appears that one hundred and nineteen patients were admitted, of whom one hundred and thirteen recovered, and six died, being an average mortality of one in 19 $\frac{2}{3}$ th, or a fraction more than five per cent., and if the two cases, in which all prospect of benefit from treatment had ceased before admission, are deducted, the mortality will appear as only one in 29 $\frac{1}{4}$, or rather less than 3 $\frac{1}{2}$ per cent.

ACADEMY OF MEDICINE, PARIS.

Sept. 16 and 23, 1851.

On Therapeutic Processes, the principle of action in which is similar to that of impermeable varnishes.

M. ROBERT-LATOUR submitted a note in which he compared the various forms of impermeable varnish, for topical use in inflammations, whether internal or external. He enumerated for this purpose fatty matters as employed in coryza and catarrh; the tissues and plasters also frequently used in these complaints; mercurial ointment applied to the abdomen in peritonitis and erysipelas, as well as those used to control the eruption of small-pox; the ointments of sulphate of iron and nitrate of silver employed in the two last diseases; the application of oils, ointments, plasters, in gout or rheumatism,—to all which the author attributed a controlling, not a sus-

pending, power, over the action of the air on the skin. In so far, therefore, M. Robert Latour claims a great superiority for completely impermeable coverings, especially of collodion, over all these applications.

Passing, then, to another class of facts, the author alluded to the advantages of Professor Velpeau's dextrine apparatus, and Dr. Scutin's starch-bandages in the treatment of fractures: the utility of these he considered to be due, in part at least, to the effects of the exclusion of the air in preventing or subduing inflammation.

The benefits that have been supposed to be derived from compression in certain local inflammations, *e. g.*, orchitis, M. Robert-Latour considered to be owing to the impermeability of the dressings.

The dressing of wounds by occlusion, and the advantages of subcutaneous incisions, the author also regarded as instances of the benefits to be derived from the prevention of the contact of air with inflamed surfaces. The essential and initial phenomenon of inflammation, according to M. Latour, consists in the exaggeration of animal heat in a more or less circumscribed space, while the redness and swelling are but the result of dilatation of the blood-globules, the inevitable physical consequences of this increased temperature. Observing the rapid reduction of temperature in parts covered with an impermeable varnish, the author had come to the conclusion that the action of the air on the skin is an indispensable condition of calorification, and therefore, to be rational, the treatment directed against inflammation should be that which attacks the very source of the disease.

M. Robert-Latour concluded by pointing out the objections and difficulties attending the application of collodion, and stated that these may be obviated by adding a fifth part of its weight of turpentine deprived of its essence by evaporation, and five or six drops of castor oil in thirty grammes (= about seven drachms, Eng.). This combination forms a varnish, which, without losing its impermeability, acquires a suppleness and elasticity which is wanting in ordinary collodion.

Action of Ipecacuanha in large doses.

A REPORT was read on an essay by M. Delioux on this subject. The author had endeavoured to show by experiments upon animals, and by its trial upon man in some instances, the nature of the topical action of ipecacuanha; he proved that the external application of this medicine, independently of its irritating influence, has a different action when applied externally from that which it exhibits when taken into the sto-

mach; that in the former case it simply exerts an irritant action similar to many other substances, whilst its emetic operation, according to M. Delioux, is due to the absorption of its active principle (emetine).

New mode of applying the Obstetric Forceps at the brim of the Pelvis.

DR. HATIN read a paper in which he stated that the mode of applying the forceps according to his proposal differed from that in common use; 1st, inasmuch as it leaves a free choice of the hand on the branch which shall be first introduced; 2ndly, both branches are guided by the same hand; 3rdly, the whole hand is passed as far as possible, instead of only four fingers being introduced into the vagina.

This mode of applying the forceps, the author asserted, simplifies and facilitates the operation, and affords greater opportunities of fully examining the exact position of the head; at the same time it secures the right application of both blades without injury to the uterus or foetal head.

Employment of Iodine in Abscesses.

M. BONNAFONT related two cases which exhibited the beneficial effects of the injection of iodine in chronic abscesses.

SURGICAL SOCIETY, PARIS.

Oct. 1, 1851.

Phagedenic Ulceration of the Vulva.

M. HUGUIER presented a specimen of this form of disease, which, in his published researches, he has distinguished from other forms of ulceration with which it has been confounded.

A woman suffering under lupus of the external generative organs had been several months under the care of M. Vernois. The usual modes of treatment had all failed; the ulceration, continuing its ravages, had destroyed all the vestibule, a part of the nymphæ, half of the urethra, and had extended to the soft parts on the pubis. Five months since, this patient came under the care of M. Huguier, who, seeing the inutility of previous treatment, and the tendency of the disease to spread, determined upon an operation. By means of a bistoury, all the disease was removed; the entire urethra was sacrificed, the incisions having been carried to the sub-pubic ligament; a part of the recto-vaginal septum was also removed. Hæmorrhage was but trifling. The cure was perfect. The loss of the urethra did not impair the functions of the bladder. Cicatrisation

was completa in twenty days. Two months afterwards she had died from an iliac abscess, with caries of the bone.

M. Huguier presented the genitals of this patient; no trace of lupus could be discovered; the cicatrices were perfectly healthy. M. Huguier stated that he had frequently performed the same operation with equal success.

Necrosis of the Cranial Bones after Erysipelas.

M. LARREY related the following singular case:—In a patient, fifty-two years of age, the scalp having become detached by suppuration, inflammation of the bone followed, and was productive of necrosis and separation of the entire bones of the arch of the skull. The patient had not presented any signs of disorder of the cerebral system, although the membranes of the brain were covered only by integument, so that the movements of elevation and depression of the brain were perceptible.

*** A parallel to this case was seen in that of a patient in Bethlehem Hospital, who, having been too vigilantly watched, to permit his executing his suicidal intentions in any other way, laid the back of his head on the fire, and completely charred the scalp, destroying the vitality of a large portion of the skull. The arch of the cranium became detached, and was deposited by Mr. Lawrence in the museum of St. Bartholomew's Hospital, while the patient was living in Bethlehem for several years with only membranous and tegumentary covering to his brain.

BIOLOGICAL SOCIETY, PARIS.

Summary for August, 1851.

New Proof in support of the Hallerian Doctrine of Muscular Irritability. By M. BROWN-SEQUARD.

M. BROWN-SEQUARD observed that, inasmuch as the opponents of Haller had persisted in denying the independence of the irritability of muscular fibre with regard to the nervous system, it is important that such facts as occur in support of the opinion of that illustrious physiologist should be recorded. It is generally admitted, the author observes, that, at the end of five or six days after the division of the sciatic nerve of an animal, that it is incapable of inducing muscular contraction, however energetic may be the excitant that is employed. The muscles themselves, on the contrary, retain their irritability much longer—indeed, indefinitely. M.

Brown-Sequard had kept a rabbit twenty-one months after division of the facial nerve, and has seen irritability remain in the paralysed muscles during the remainder of the animal's life. It could not be urged in this instance that reunion of the divided ends of the nerve had taken place, since the nerve itself had been entirely removed from its origin in the medulla oblongata to its division in the muscles.

Several years ago, M. Brown-Sequard had related an experiment which demonstrated the existence of irritability in the muscular fibre as an organic endowment, independently of nervous influence. He divided the sciatic nerve of one side in two rabbits and two guinea-pigs. Ten days afterwards he satisfied himself that no movement followed the galvanisation of the sciatic nerve; but the muscles contracted forcibly when brought between the two conductors of the pile. This ascertained, the aorta was tied below the origin of the renal arteries; and, three hours afterwards, the galvanic pile was again used: no contraction of the muscles followed. The ligature having been relaxed, the muscles again became irritable—the sciatic nerve had in no degree regained its property. It was evident, from this experiment, that the blood, or rather nutrition, was the source of the irritability of the muscles.

M. Brown-Sequard has recently performed another experiment more decisive still than the above. The experiment was the same as the preceding, with the exception of one important point. In the experiment related the ligature was not loosened until the muscular irritability had disappeared; in the new experiment, the author had not only waited the disappearance of irritability, but had observed the supervention of cadaveric rigidity. This experiment, then, had shown that the muscles, deprived of the influence of their cerebro-spinal nerves, are capable of being restored to their state of irritability under the action of nutrition.

Case of Organic Constriction of the Pylorus, with Atrophy of its Tunics—Atrophy of the Liver—Numerous Inorganic Constrictions of the Colon. By M. CHARCOT.

A man, aged sixty-four years, of temperate habits and good general health, began, about eighteen months since, to experience vomiting two hours after each meal. The matter vomited consisted of the food mixed with mucus. After a year, there occurred, on three or four occasions, a vomiting of black matter resembling soot. Since then the matters vomited have consisted generally of food and mucus; and, occasionally, of a chocolate or coffee-coloured substance.

At the outset of the disease the patient suffered from obstinate constipation. Emaciation and debility followed. Acute pains were also felt in the abdomen, irradiating from the stomach, aggravated by pressure, worse before and during vomiting, but never entirely absent. The abdomen was large, sometimes dull on percussion in the greater part of its extent, and at these times palpation could detect a gurgling in the region of the stomach. This the patient himself, was sensible of when agitated, or when he attempted to reach to a distance. At other times the abdomen was sonorous, and the gurgling was not perceived. The former condition was usually observed if the vomiting had not occurred for two or three days, and the patient could from the first predict their return: when the second condition would exist, a third or intermediate state was observed by the patient, in which the left hypochondrium and the superior portion of the epigastric region was sonorous: the umbilical region, on the contrary, as well as the left iliac region, was dull and resistant to the finger in percussion. The extent of this dulness varied somewhat with the full or empty state of the intestines. The border of the liver could not be detected by percussion, on account of a fold of intestine which gave a resonance to the right hypochondrium. The usual dulness over the liver was not observed, leading to the suspicion that this gland was diminished in size. The urine presented no change. Two months before death œdema and ascites appeared; and, from the date of the occurrence of the latter, the vomiting had entirely ceased. The habitual constipation gave place to frequent diarrhœa; the tongue became red, and the mouth aphthous; the limbs and trunk greatly emaciated; the epigastric pains incessant and more violent. He died on the 3d Sept. 1850.

The following was the diagnosis formed during life:—1. An obstacle to the passage of alimentary matter, in the pyloric region, probably a carcinomatous tumour; 2. Enlargement of the stomach; 3. Diminution in the size of the liver; 4. Obstruction to the circulation in the liver, and probably also in the vena cava inferior, the consequence of the supposed tumour. There existed also the indications of spontaneous coagulation of the blood in the iliac veins.

On examination of the body, the stomach was not found to be so large as had been supposed during life, having become collapsed in the abdominal cavity. At the pylorus, a constriction so close and resisting was observed, that it resembled the ligature of a thin cord. The small intestines were all much contracted in their calibre.

The colon was at several places contracted over an extent of three or four inches: this constriction, however, yielded to forcible dilatation. The tunics of the stomach were hypertrophied; its capacity twice that of ordinary; the mucous membrane was pale, and presented several grey spots where the membrane was thinned, especially near the pylorus, which admitted a pen with difficulty; the mucous membrane was thinned at this point, and the muscular coat had entirely disappeared. The pylorus, duodenum, and liver, were connected by old adhesions. The liver was of about half its usual size, its colour nearly normal, its structure friable, and presented less than usual fat when examined by the microscope. Other viscera presented nothing unusual. The heart and large vessels were all healthy.

The author added some remarks, in which he referred the constriction of the pylorus to the results of peritonitis, the traces of which remained.

Transmission of Scabies from Animals to Man.

M. BOURGUIGNON related experiments which proved the non-communicability to the human skin, not only of scabies by its acari, but also of the attendant eruptions which appear on the integuments of animals.

The patient readily gave her consent to an operation, and as it was determined that an attempt should be made to remove the disease without taking away the whole of the base of the jaw, a proceeding likely to prove tedious, the patient was narcotised by ether, the effects of which being more permanent than those of chloroform, it was hoped would last until the conclusion of the operation.

June 26th.—Ether was administered by Dr. Parker, and the patient continued to inhale it for full a quarter of an hour before she was sufficiently under its influence. Mr. Curling made a semi-circular incision, which commenced about an inch below the angle of the mouth, and extended beyond and above the angle of the lower jaw. The flap was dissected up, so as to expose the tumour. The facial and two or three other arteries which bled freely were instantly tied. The jaw in front of the disease was divided as far as a quarter of an inch from the base by means of a narrow-bladed saw, the tongue being at the same time protected by a piece of gutta serena introduced at the mouth. The ascending ramus beyond the disease was partially sawn through, and the bone then grooved with a Hey's saw at a short distance from the base, so as to connect the two sections, the object being to remove the disease leaving a narrow portion of the base. Mr. Curling completed the division of the jaw lengthwise with a strong pair of curved cutting pliers constructed for the purpose by Weiss, but in doing so the narrow strip of the base of the bone was fractured. Anæsthesia lasted during the whole of the operation. An hour afterwards, when all bleeding had ceased, Mr. Curling carefully adjusted the fractured ends which had become displaced by muscular action, and secured them in connection by a silk ligature. The wound on the face was then closed with eight sutures. The patient was allowed nutritious food in a fluid state. She recovered favourably from the operation. A great part of the external wound healed immediately. A month after the operation a small exfoliation from the fractured part was extracted from a sinus in the wound, and another, also small, was removed from the mouth with the ligature which had secured the broken ends. The wounds, both externally and in the mouth, had quite healed by the first week in August, when she was sent into the country for the improvement of her general health. She paid a visit to the hospital, September 11th, and was then in good health. The jaw was united, and quite firm on the right side, and she was able to masticate without difficulty on the other. The morbid growth was examined microscopically, and found to be of a fibrous character.

Hospital and Infirmary Reports.

LONDON HOSPITAL.

Large Fibrous Tumour of the Lower Jaw—Partial Excision of the Jaw—Recovery.

THEODOSIA MOSELY, æt. 25, a single woman, not in strong health, was admitted into the London Hospital, in June 1851, under the care of Mr. Curling, in consequence of a large growth springing from the lower jaw on the right side. It extended from the canine tooth as far back as the ascending ramus, affecting the alveolar process and bone below to a short distance from the base, and forming a red fungous-looking swelling which projected into the mouth and caused a swelling externally. The disease prevented mastication, and slight bleeding took place occasionally from the surface. It had not caused much pain, but shooting sensations were sometimes experienced. The morbid growth was first observed about Christmas time, and appeared after a gum-boil. It had steadily increased since.

REMARKS.—In the operation above described, Mr. Curling endeavoured, by leaving a strip of bone in order to preserve the continuity of the jaw, to prevent the displacement and dragging of the bone by muscular action which commonly occurs after excision of a portion of the jaw. The disease inside the bone having extended nearer the base than outside, the strip left was necessarily so slender that it readily fractured when the pliers were used, but the object was afterwards accomplished temporarily by securing the extremities in apposition by means of a ligature, and permanently by a bony union of the fractured part.

It was a long time before the patient got fully under the influence of ether, but the prolonged anæsthesia produced was quite successful in saving her all pain from the operation, which necessarily occupied some little time, and did not admit of the inhalation being kept up, and by keeping the head as much as possible turned over to the side operated on, no inconvenience arose from swallowing blood. In many of the operations performed at this hospital, especially in those likely to be tedious, narcotism is produced in the first instance by chloroform, and the effect kept up afterwards by the inhalation of ether, which is less depressing than chloroform, and can be more safely administered for a long period.

Medical Intelligence.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN IN LONDON AND ITS VICINITY.

A Half-Yearly General Meeting of this Society was held on Wednesday evening, the 8th instant, in the Library, at No. 53, Berners Street, by permission of the Council of the Royal Medical and Chirurgical Society: Sir C. Mansfield Clarke, Bart. the President, in the Chair.

From the minutes read, it appeared that a Committee had been appointed to consider the present position of the Society in connection with the Commissioners for the Reduction of the National Debt, and the future investment of the Funds, as affected by the New Act regulating Friendly Societies, 13 and 14 Vict. c. 115.

The Report of the Committee was read, containing the questions submitted to counsel on the subject, drawn up by Mr. Upton, Solicitor to the Society of Apothecaries, with the answers thereto, and recommending that the Society should not restrict the amount of its annual grants

made to Widows, either of old or of new members, within the sum of £30 allowed for Friendly Societies investing with the National Debt Commissioners under the New Act; but, that all investments should be made in the new $3\frac{1}{4}$ per cent. annuities; that £2000 should be withdrawn from the sum now deposited with the Commissioners and invested in the names of new Trustees, to form a fund for the future grants to Widows of new members; and that such fund should be increased, and the old fund diminished, as the relative demands upon each, may, in course of time, be found to require.

These recommendations the Court of Directors have adopted.

At the recommendation of the Court of Directors the sum of £20 was voted, as a donation, to a widow who was not eligible to receive the usual relief, her husband not having been a member for two years at the time of his death.

A Committee has been appointed to revise the Laws of the Society. It will be assisted by Mr. Upton; and Members are to be invited by circular, to communicate, under cover, to the Secretary, Mr. C. R. Walsh, any alterations which they may have to suggest.

A ballot took place for the election of Officers. The six senior Directors, viz., Drs. Burrows and Ferguson, Messrs. Wormald and Lucas, Law and Sterry, having retired in rotation, Drs. Little and Hamilton Roe, Messrs. Walne, T. H. Fisher, William Self, and Hanks, were elected Directors.

Thanks were cordially voted to the President, Sir Charles Clarke.

STATISTICS OF BIRTHS, DEATHS, AND MARRIAGES IN ENGLAND.

A GENERAL abstract of the marriages, births, and deaths registered in England during the year 1849, has just been published, and returned to Parliament. From this, the 12th annual Report of the Registrar-General, it appears that the total number of marriages registered in England during that year was 141,833: what the population then was is not stated, but some idea of the proportion is given by a reference to the fact that by the census in 1851, it was shown to be 17,922,768; in 1841, 15,914,148. Of the marriages registered in the year 1849, 123,182 were according to the rites of the Established Church; 4,199 in registered places by Roman Catholics, and 8,662 by the ministers of other Christian denominations. There remain 53 marriages of Quakers, 229 of Jews, and 5,558 which took place at the superintendent registrar's office. The number of men who signed the marriage register with marks was 44,027; of women who did so,

65,135. There were married 6,650 men, and 21,105 women not of full age; 19,647 widowers, 12,594 widows. There were also contracted between widowers and widows 6,492 marriages; between widows and bachelors 6,102; between widowers and spinsters 13,155; and between bachelors and spinsters 116,134. The number of marriages registered in the quarter ending the last day of March was 28,429; June, 35,844; September, 33,874; December, 43,736. The abstract of births for the same period shows a total (exclusive of still-born) of 578,159—295,158 of them males, 283,001 of them females. Of illegitimate births there were registered 39,334—20,049 males, 19,285 females. The number of deaths was 440,853—males 221,801, females 219,052. Of these deaths there were registered in the quarter ending the last day of March, 105,871; June, 102,153; September, 135,235; December, 97,594.

THE CHOLERA IN THE CANARIES.

LETTERS just received announce that the cholera has ceased in these Islands, no case having occurred at Palmas since the 6th of August. The other Islands have entirely escaped the disease throughout. How is this to be explained on the theory of epidemic influence?

THE YELLOW FEVER.

THIS disease has abated in the various seaport towns of South America which had been attacked by it, and it is announced that it has altogether ceased at Oporto.

COUNTY AND BOROUGH LUNATIC ASYLUMS.

A RETURN to Parliament has been recently printed, showing that, in the year ending the 31st of December last, a sum of £216,328. 6s. 7d. was received on account of county and borough lunatic asylums in England and Wales. The expenditure in the period amounted to £194,007. 19s. 1½d., and on the 31st of December the balance in hand was £28,515. 3s. 3¼d., on which day there was £6,214. 15s. 10¼d. due to the treasurers.

ILLEGIBLY-WRITTEN PRESCRIPTIONS.

THAT well-managed and useful work for apothecaries, the American Journal of Pharmacy, details a case, attended with fatal results from the miserable hand-writing of a physician. The jury of inquest rendered the following verdict, viz., "that the said Henry J. Rowland came to his death by a seated disease of congestion of the brain, which disease was matured from disorganization of the stomach, produced by over-doses of worm-seed oil, as prescribed by the family physician. The jury deemed it but justice to state, that no blame should

be attached to David A. Shultz, in the employment of Robert Shoemaker, druggist, in causing death of said child." Without copying the whole article, it is sufficient to observe that the prescription was so illegibly written, the only thing that could be made out of it was an article that proved destructive. Physicians are prone to become exceedingly, if not reprehensibly, careless in the hurried scrawls they too often make in their recipes. The wonder is that so few accidents occur from that source. Nothing but the familiarity of an apothecary with the peculiarity of some obscure chirography, in certain cases, saves both life on one side and reputation on the other. Lawyers proverbially write so that they can scarcely be read—but as their notes relate to fees, each scrawl is tolerably well deciphered before payment; whereas the physician's obscure abbreviations are taken for granted to be some ill-flavoured drug, which is swallowed without a murmur—it may be for life or death.

We perceive the Journal above alluded to is violently opposed to the reform now going on, of writing prescriptions in English. Reluctantly as the editors part with the old system, they must yield, or by and by be left behind.—*Boston Medical Journal*.

CHEAP THERMOMETERS FOR MEDICAL USE.

ADVERTISEMENTS have recently appeared in the medical journals, announcing for medical use box-wood thermometers, at the low price of one shilling, and eighteen-pence.* These instruments, considering the manner in which they are got up, are undoubtedly marvellously cheap; but we must remind our readers that a thermometer to be useful for medical purposes must be *correct*. The result of our experience is, that the tubes of Bennett's shilling thermometers generally contain some portion of air, and that they are incorrect by one or two degrees. Out of three eighteen-penny thermometers, we found one only correctly graduated and the tube entirely free from air.

Freedom from air in the tube is shown by the column of mercury falling through and *filling* the *whole length* when the instrument is inverted; while correctness of graduation is known by comparison with a good thermometer. The range of temperature should not be above 120° for common purposes.

FRIGHT PRODUCING DEATH.

It is important that the following extraordinary effects of fright, upon a strong unreasoning animal, should be preserved for future reference. "A horse belonging

* At Bennett's, 65, Cheapside.

to Mr. Joseph Palmer, of Franklin, Mass., was grazing in the yard near the fence, when the elephants belonging to Barnum's Menagerie were passing along. The horse did not observe them until they were quite close to him, when looking up and seeing the huge animals, he started back in fright, ran to the opposite side of the yard, stood for a moment quivering, then dropped dead. He was literally frightened to death. The extreme aversion of horses to animals larger than themselves is nothing new, but this is probably the first instance of such a remarkable result."—*Boston Medical Journal*.

EPIDEMIC CHOLERA AND DYSENTERY ON THE CONTINENT.

INTELLIGENCE from Prague, dated Sept. 11th, informs us that the cholera had appeared there with considerable severity. Death is said to have followed the attack within a few hours. The hospitals were crowded with patients.

An epidemic cholera had also appeared in the Commune of Avesne-le-Comte.

At Blois, severe enteritis and dysentery had been prevalent at the end of August. A local cause of insalubrity in a manufactory of "animal black," is pointed out as existing in that town.

A species of dysentery is also reported to have committed ravages in the Commune of Nivillae (Morbihan): upwards of seventy deaths from this cause had occurred out of a population of three thousand.

Dysentery is likewise reported to have been very fatal in the Canton of Guéméné (Loire Inferieure). The number of patients is stated at three hundred, the deaths one hundred, by the 1st of August. The greatest mortality was among infants, who form one third of its victims.

Cholera has been very prevalent at St. Omer, but has yielded readily to remedial measures taken in the outset.

ROYAL COLLEGE OF SURGEONS.

GENTLEMEN admitted members on the 10th inst.:—Messrs. T. B. Farncombe—G. R. Naylor—G. Atkin—R. C. Graves—O. S. Evans—T. Willis—E. Pearl—G. Scott—R. Cockerton—J. B. Butcher—M. O. Larmuth.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 9th October, 1851:—Samuel Bowen Partridge, Newport, Monmouthshire—James Doubleday, Blackfriars Road.

OBITUARY.

M. DE SAVIGNY, Member of the Academy of Sciences, and an eminent zoologist, died

at Versailles, on the 6th October, from an attack of paralysis. He accompanied the French into Egypt, and published some valuable researches on entomology and other branches of natural history.

MALIGNANT TUMOUR ARISING FROM PERIOSTEUM OF LEFT TIBIA—REMOVAL OF THE LIMB. CASE REPORTED BY DR. J. M. WARREN.

THE patient was a mechanic, 52 years of age: his general health has always been good; knew of no hereditary tendency to carcinomatous disease; exhibited none of the appearances of the diathesis.

About twenty-three years ago, he struck the hook of a heavy ox-chain against anterior aspect of left tibia at about its middle. Within twenty-four hours after the injury, noticed a "swelling as large as a kernel of corn," which he was confident was not like the swelling of an ordinary bruise, being much harder, not discoloured, and excessively tender. This gradually increased, until, in three or four weeks, it was as large as a pullet's egg. It so continued for twenty years, never painful, but always excessively tender.

Three years and a half ago, while driving a nail, the hammer glanced and struck partly on the skin bone and partly on the tumour. The pain from the blow was excruciating, continuing for twenty-four hours, when it gradually subsided and he went about his business, but was subject to twinges of pain at intervals of a few hours for two or three months, the average amount being greater at night.

Two or three months after the blow, he noticed a gradual enlargement of the tumour, which, in 18 months, had grown to the size of a large orange. The increase of pain was in direct ratio to the growth. At this time, the whole of his limb below the tumour was swollen and œdematous, the tumour itself very red—at apex, a bright crimson, the integument covering it very thin and tense.

From a slight accidental abrasion, granulation now shot out, bleeding freely at the slightest touch. About a week after, the tumour was removed by a surgeon, and portions of the tibia, to which it proved to be adherent, chipped off. The wound healed in three months, and remained sound for a year. Then, a little to the outside of the cicatrix, a swelling was noticed of the diameter of a penny. This followed precisely the same course as the preceding tumour, altogether resembling it, except in size and situation, being a little more on the outer aspect of the leg, and a little larger.

The appearance of the tumour was as follows just previous to removal of limb. Six

inches above malleolus, on outer aspect of left tibia, and apparently adherent to it, was a lobulated tumour, eight and three quarter inches in circumference, two inches in height. It was somewhat constricted at its base by the integument through which it had extruded, as if forced up from beneath. Just to inside of its base was a hard tumor, in size and shape like a large almond, which he said very much resembled the original tumour of twenty-three years ago. This had been about six months in acquiring its present size.

Ten days ago, apex of large tumour became sloughy, and so continued. Integument at base was reddened, and the tenderness was greatest at that spot. When the limb was at rest, the pain was slight; after exercise, much increased. Patient kept about his business till within ten days.

No other tumor observed externally; none felt through abdominal parietes; no apparent enlargement of inguinal glands.

Dr. Warren removed the limb, above the knee-joint, by the circular method. On sawing the tibia longitudinally, after removal, it was found that the original tumour was between the periosteum and the bone. Its size was about that of a walnut; it was quite firm, white and fibrous in appearance; springing from one side of it was the large fungous growth described above. — *American Journal of Medical Sciences.*

ON ATROPINE AND DATURINE.

DR. PLANTA has carefully examined these two alkaloids, and has found them to be very similar. Both crystallize in slender, coloured needles; are unchanged by exposure to the air; inodorous; heavier than water; soluble in alcohol; less so in ether, and soluble with difficulty in water. One part of atropine requires for its solution 299 parts of water at the ordinary temperature; and according to M. Geizer, daturine requires 288 parts of cold and 72 parts of warm water. Both alkaloids liquefy at 88° to 90° Cent. ($=190^{\circ}$ to 195° Fahr.) without losing weight or suffering decomposition. At a higher temperature they are partly volatilized, and partly decomposed. Their watery solution possesses a strong alkaline reaction. By their combination with sulphuric and hydrochloric acids, neutral compounds are formed, which may be evaporated to the consistence of syrup without showing signs of crystallization. These salts dissolve readily in alcohol and in water; they do not dissolve with facility in ether. Ammonia and potash, and their carbonates, precipitate their concentrated solutions, and redissolve the precipitate by addition of excess. The bicarbonate and phosphate of soda do not produce any change. Chloride of gold oc-

casions a yellow crystalline precipitate, slightly soluble in hydrochloric acid. Chloride of platinum gives a pulverulent precipitate with muriate of atropine; this precipitate aggregates into a resinous-like mass soluble in hydrochloric acid. Muriate of daturine also gives a precipitate with chloride of platinum, but only when the solutions are concentrated, and the precipitate is not soluble in hydrochloric acid. Chloride of mercury produces, in concentrated solutions of these salts, a white precipitate, very soluble in hydrochloric acid and salts of ammonia: hydrargyro-iodide of potassium, a white, solid, caseous precipitate, with muriate of atropine. The addition of hydrochloric acid causes a still firmer consolidation of the mass. Iodide of potassium has no effect upon the same salt. M. Planta has not determined the action of the two last reagents with muriate of daturine. Sulphocyanuret of potassium has no action upon the salts of these alkaloids. Tincture of iodine produces a brown precipitate. Tannic acid and tincture of galls produce, with hydrochloric acid, a flaky precipitate. Nitropicric acid causes a yellow precipitate. The analysis of these two alkaloids, by M. Planta, gives for each the same formula— $C^{34}H^{25}NO^6$.—*Journal de Chimie Médicale*, Septembre 1851.

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TUMOUR OF RIGHT ARM, REQUIRING AMPUTATION AT THE SHOULDER-JOINT.

DR. J. MASON WARREN exhibited a tumour apparently of a malignant nature, and stated the case, which was as follows. The patient was a tall, thin man, thirty years of age. He had always been healthy until last April, when he had a discharge of blood from the kidneys, unattended with pain, which lasted for one or two weeks. In June, the present tumour appeared as a small hard lump under the skin of the arm near the insertion of the deltoid muscle. This had gradually increased until it nearly encircled the arm, extending under, and raising up, the brachial arteries and nerves. The motions of the arm were not much affected by its pressure, but latterly it had taken on a more rapid increase, and the active portion of it was somewhat painful. Dr. Tewksbury, of Portland, considered the case a critical one, demanding the removal of the tumour or the arm, and directed the patient to Dr. W. After a very careful examination of the tumour, which was quite firm and moveable, it was agreed that the patient should be put under the influence of ether, the tumour cut into, and if found to possess the character of a malignant growth, that the arm should be removed at the shoulder-joint.

The operation was done on the 15th February, and on the tumour being incised,

all the gentlemen present, viz. Dr. Ray of Kentucky, Drs. Thorndike, Minot, Williams, Foltz, Brown, Stone, and Gore, coincided with Dr. W. in regard to its having the appearance of a carcinomatous growth. The bleeding from it, which was quite free, was therefore stanchcd with a bit of sponge, and the removal of the arm proceeded with. This was done by an anterior and a posterior flap, the former being made from without inwards, by means of a scalpel, in order to have a more regular wound, and the better to avoid impinging on the tumour. The subclavian artery, as it passes over the first rib, was so effectually compressed by Dr. Williams that scarcely any blood was lost.

The patient is now doing well. On the 20th of January, he had a discharge of bloody urine, which he attributed to the confined position in which he had remained, on his back, and which had produced a severe pain in the loins. He seemed to attach but little importance to it, and in fact it soon ceased. Dr. Thorndike, who has charge of him, reports that he is rapidly recovering.

The tumour, on dissection, presented a most lardaceous appearance, and, under the microscope, showed much fibrous tissue, in which, after much investigation, cancer-cells were distinguished.—*American Journal of the Medical Sciences.*

BOOKS & PERIODICALS RECEIVED FOR REVIEW

DURING THE LAST TWO WEEKS.

Manual of Human Physiology for Students.
By J. M. Cottle, M.D.

A Collection of Facts illustrative of the Morbid Conditions of the Pulmonary Artery. By Norman Chevers, M.D. Chittagong.

On Improving the Condition of the Insane.
By Henry Monro, M.B. Oxon.

Hints on the Management of Lunatic Asylums. By D. C. Campbell, M.D.

Summary of Suggestions for Additions on the Law of Lunacy, &c.

Phillips's Translation of the Pharmacopœia Londinensis, 1851. By J. D. Smith.

Bradshaw's Companion to the Continent, &c. By Edwin Lee, Esq.

A Letter to R. K. Greville, LL.D. in Reply to Professor Balfour. By J. J. Griffin.

Journal de Chimie Médicale. No. 10, Octobre 1851.

Comptes Rendus. No. 12, 22e Septembre.

AMERICAN PUBLICATIONS.

The New York Register of Medicine and Pharmacy. By C. D. Griswold, M.D. No. 9 (Vol 2).

New York Journal of Medicine and the Collateral Sciences. By J. S. Purple, M.D. September 1851.

Boston Medical and Surgical Journal. September 1851.

The American Journal of Dental Science. April and July, 1851.

British American Medical and Physical Journal. September 1851.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Oct. 11.

| BIRTHS. | | DEATHS. | |
|-----------|------|-----------|-----|
| Males.... | 741 | Males.... | 494 |
| Females.. | 674 | Females.. | 459 |
| | 1415 | | 953 |

CAUSES OF DEATH.

| | |
|--|-----|
| ALL CAUSES | 953 |
| SPECIFIED CAUSES | 946 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 242 |
| <i>Sporadic Diseases, viz.—</i> | |
| 1. Dropsy, Cancer, &c. | 45 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 97 |
| 4. Heart and Bloodvessels..... | 44 |
| 5. Lungs and organs of Respiration | 111 |
| 6. Stomach, Liver, &c. | 72 |
| 7. Diseases of the Kidneys, &c. | 16 |
| 8. Childbirth, Diseases of Uterus, &c. | 10 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 6 |
| 10. Skin..... | 1 |
| 11. Premature Birth | 35 |
| 12. Old Age | 33 |
| 13. Sudden Deaths..... | 7 |
| 14. Violence, Privation, Cold, &c.... | 31 |

The following is a selection of the numbers of Deaths from the most important special causes :

| | | | |
|--------------------|----|------------------|-----|
| Small-pox..... | 18 | Convulsions..... | 31 |
| Measles..... | 14 | Bronchitis | 38 |
| Scarlatina | 55 | Pneumonia | 55 |
| Hooping-cough | 11 | Phthisis | 132 |
| Diarrhœa..... | 46 | Lungs | 8 |
| Cholera..... | 4 | Teething | 15 |
| Typhus..... | 60 | Stomach | 5 |
| Dropsy | 16 | Liver..... | 11 |
| Hydrocephalus | 19 | Childbirth | 5 |
| Apoplexy | 19 | Uterus | 4 |
| Paralysis | 24 | | |

REMARKS.—The total number of deaths was 31 above the average mortality of the 41st week of ten previous years. The most remarkable feature in the return is the progressive increase in the deaths from Scarlatina.

METEOROLOGICAL SUMMARY.

| | |
|--|-------|
| Mean Height of the Barometer | 29.74 |
| Thermometer ^a | 54.6 |
| Self-registering do. ^b Max. 0.0 Min. 35. | |
| ^a From 12 observations daily. ^b Sun. | |

RAIN, in inches, .42. — Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 6° above the mean of the month.

NOTICES TO CORRESPONDENTS.

Dr. H. S. Belcombe.—We shall be glad to receive the Remarks on Treatment when convenient. Mr. Daniel's letter has come to hand. It shall be referred to the writer of the article.

The papers of Dr. Ballard, Dr. F. Renaud, Dr. Hannover, Mr. Barlow, and Dr. Belcombe, are in type, and will be published as speedily as possible.

The Introductory Lecture delivered at the Liverpool School of Medicine will be inserted next week.

Mr. J. B. Harrison's letter will be inserted. Dr. Hull.—The paper is under consideration.

Lectures.

CHARACTERISTICS OF THE SUCCESSFUL TEACHER AND SUCCESSFUL PUPIL;

BEING THE INTRODUCTORY LECTURE DELIVERED AT THE OPENING OF THE LIVERPOOL MEDICAL SCHOOL FOR THE SESSION 1851-52.

BY R. HIBBERT TAYLOR, M.D.

Lecturer on Ophthalmic Medicine and Surgery.

HAVING been requested to deliver the Introductory Lecture at the opening of the present session of the medical school, I willingly undertook the task; but in addressing myself to its performance, I found the path beset with many obstacles. I do not seek to shelter myself under the plea of incapacity, feeling assured that to perform the duty creditably does not demand the possession of any very brilliant talents; nor do I aim to invoke your sympathy, by the expression of a wish that it had been confided to abler hands than mine; knowing that you will as kindly accept, as it is cheerfully offered, my humble endeavours to fulfil your wishes. The difficulties to which I have alluded sprung not from these sources, but lay rather in the perplexity which I felt as to the selection of a suitable and interesting subject on which to address you.

The able and eminently practical discourse of my colleague, Dr. Inman, entitled "Directions for Medical Study," and delivered, on a like occasion with the present, two years ago, has shut me out from that important avenue of thought; while the no less interesting address, on "The Tendency of Medical Studies to produce Infidelity and Immorality," with which Dr. Nevins opened our last session, has debarred me from another inviting path, which I might otherwise have felt inclined to pursue. There still lay open to me, it may be said, many fair fields in medical literature and science, from whose teeming produce I might have gathered some wholesome fruits for your acceptance; but I have withheld my foot from entering them—remembering that themes fraught with interest to those already instructed in our profession might not prove of equal value to those who are just entering upon its study; and as, in an introductory lecture, such as this, the interest of the pupil, rather than of the teacher, is to be kept in

view, I have preferred inviting your attention to a subject which equally concerns them both; and the consideration of which, in a spirit of candour and kindness, may tend to unite us more cordially together in entering upon the labours of another session.

Holding the office of teacher in this school, and, as such, occupying the responsible position of an instructor of youth, I have often been led to consider the relationship which subsists between teacher and pupil, especially with reference to its reciprocal duties. There are qualities in a teacher which tend to arouse a pupil's energy, to command his respect, to encourage his perseverance, and to win his regard; and these, I humbly conceive, it is the duty of every instructor to cultivate in himself to the utmost of his power. There are also qualities and habits in a pupil which are not less pleasing to his instructor than beneficial to himself, and these it no less becomes him to acquire and to practise. To this subject, viewed in reference to some of its mutual relations, I now propose directing your attention. The theme is a difficult one, not less from its extent than from the diversity of opinion which we may suppose to exist with regard to many of its details. I shall therefore content myself at present with offering a few suggestions descriptive of some of those qualities which it appears to me should characterise a teacher, and also indicating some of those habits which I would wish to see springing up and developing themselves in the youth who frequent this school as pupils.

In entering upon the first part of the subject, or the qualities of a teacher, I would beg to disclaim, *in limine*, all intention of setting myself up as the instructor of my colleagues. Some, from their years and long experience in tuition, are much better qualified than I am to handle the subject proposed for our consideration, while all are equally competent with myself to form an opinion regarding it. Neither would I be misunderstood as meaning to cast any reflection upon the manner in which their instructions have been hitherto conveyed, or in any degree to insinuate that they do not individually possess those qualities which I may deem essential to a successful teacher. The opinions which I state must be regarded as simply my own, and as expressive of the spirit and temper in which I would wish, individually, to fulfil the office of teacher, and they are to be received and judged of according to their merits. I ask for them no consideration beyond what they are worth, and, at the same time, freely concede to others the right to exercise upon the subject that in-

dependence of thought which I have claimed for myself.

The "wise man" informs us that it is well to be zealously affected in a good cause; and experience confirms the truth of the admonition; inasmuch as we find that the most effective mode of awakening the zeal and energy of others, in any pursuit which we would recommend to their notice, is *to be ourselves thoroughly in earnest*. Gifted by nature with numerous and varied sympathies, more or less lively according to our different temperaments, the sight of strong emotion in another tends to awaken a corresponding feeling in ourselves; so that, from the zeal and ardour exhibited by the pupil, we may, to a certain extent, safely predicate how far such qualities are possessed by the teacher. In looking back to our own student days, we can recall the different feelings awakened in our minds, and the various impressions produced on our characters—some lasting as life itself—by the instructions of the teachers through whose hands we successively passed; the kindling ardour in the pursuit of knowledge awakened by one—the calm resolution to face every difficulty, and painfully climb the steep ascent of science, inspired by another—and the utter indifference, if not loathing repugnance, with which we gladly escaped from the dull prelections of a third. I do not say that in each and all of such examples the success or the failure is to be wholly attributed to the teacher, and that nothing is due to the character, and tastes, and habits of the student; but this I may safely aver, that a pupil's *first* impressions of a new subject of study, the interest which he feels in it, and the zeal with which he pursues it, will be materially, and perhaps lastingly, influenced by the ardour and earnestness displayed by the teacher. Example, we all know, is better than precept; and there are, in the ranks of science, as in those of war, officers of the "go-on," as well as of the "come-on" class—those who would urge their subalterns to efforts which they do not themselves exemplify, as well as those who not only point the way, but are themselves ever foremost in the van. The student, as the soldier, will quickly learn to distinguish between these leaders, and, like his comrade in war, will follow with alacrity, or hang back in suspense, as the one or the other claims his obedience.

Among the various intellectual features which zeal and energy of purpose may exhibit, there is not, perhaps, one more useful to the possessor, in the acquisition of knowledge, or in communicating instruction to others, or which tends more strongly to arrest the attention of pupils, than the power which some men exhibit of

concentrating their minds, fully and exclusively, upon the subject immediately before them. He who is able to discard from his thoughts every disturbing and impertinent idea, and, keeping his mental eye fixed upon the object in view, manifests in its pursuit a degree of earnestness and ardour amounting to a temporary absorption, is sure to acquire a command over both his subject and his audience which it is worth any effort to obtain. This mental power formed a striking peculiarity in the brilliant prelections of the late Dr. Chalmers, and will probably be found, more or less, to distinguish the intellectual efforts of all men of genius. But, although allied with genius, and a frequent characteristic of such gifted spirits, it is not denied to humbler intellects: it is a quality of mind which we may cultivate in ourselves, and apply, with profit and success, in directing the thoughts and efforts of others. I speak with all the more feeling and confidence on the subject, from being able to trace, in my own mind and character, at the distance of nearly a quarter of a century, the enduring influence exerted upon it by the instructions and example of a preceptor of early youth, who possessed in an eminent degree the qualities which I have attempted to describe. The lapse of time may indeed dim our memories of the past, and growing years tend to moderate the ardour of our youthful zeal, but still these lessons of early days are not forgotten, nor their deep impressions, graven as with a pen of iron, totally obliterated; and the individual experience of many who now hear me will, I am sure, confirm the truth and importance of the principle embodied in the well-known proverb, "as the *twig* is bent the *tree's* inclined."

But let us turn to another quality which must distinguish the successful teacher—namely, *a full and accurate acquaintance with the subject-matter of his tuition*.

It may, at first sight, appear superfluous to hazard such a statement as this; for how, it may be asked, can one teach what he does not himself know. I am afraid, however, that it is no uncommon thing to find the chair of the instructor occupied by one who ought rather to assume the place of the student, or who, at least, has set out on the erroneous principle that the best way to learn a subject is to begin to teach it. In some instances, no doubt, this method has proved eminently successful; and he, who at the beginning was only one lesson ahead of his pupils, has ultimately qualified himself to be a competent and successful instructor; but such instances are the exceptions to the rule: and no one can honestly and conscientiously offer himself as a teacher who does not feel

that his pretensions rest upon a surer basis than the precarious qualification of being only a little less ignorant than his pupils.

It has been well remarked, that a fool may ask in a sentence a question which it would take a philosopher many pages to answer; and in like manner, a pupil at the outset of his career, in a new field of study, may propound a difficulty to his preceptor, which could only be simplified to the mind of the enquirer by one who was thoroughly versant with the subject. In order to convey clear notions to others, we must have clear notions ourselves; and he is best qualified to unfold the principles and practical details of any science who has most thoroughly mastered it himself. We are all aware, either by the observation of ourselves or from our experience of others, of the disposition which exists in many minds to rest satisfied with imperfect knowledge; and, either from indolence or indifference, to come short of that fulness and accuracy of information which their abilities and opportunity might enable them to acquire. Teachers, as well as pupils, are not exempt from this failing, and to the former pertains the duty of commending to the latter, by precept and example, the benefits which result from adopting an opposite and more self-denying course.

Nothing can tend more to secure the confidence of the pupil than the conviction that his instructor is thoroughly versant with his subject, nor will anything form a better stimulus to his labour than the reasonable hope that, by the use of the same means, he may attain to a knowledge as ample and profound as he sees exhibited by his master. With teacher as with pupil, the aim must be *high*, if either would attain to eminence in the especial object of study; and the instructor who is satisfied with a mediocrity of knowledge has no reason to complain if his pupils never rise above his own dreary level.

Fulness of knowledge is, perhaps, a more frequent possession than a corresponding accuracy of information; for while extensive reading, and a retentive memory, will supply us with the former, the attainment of the latter demands, in addition, much painful and self-denying labour. Reading may make the full man, and speaking the ready man; but he who would add to this two-fold cord the perfecting bond of accuracy, must subject his mind to the unwelcome discipline of patient thought,—analyzing its various contents, reducing them to order, and assigning to each idea its appropriate place and respective value.

But, in addition to the qualities already indicated as essential to the character of a successful teacher, and the value of which,

I think, none will deny, I will venture to add two others, one of an intellectual and the other of a moral aspect, which are scarcely less important and necessary. *The first is patience in conveying instruction, and the second is the employment of simplicity of language.*

Patience, we know, is a cardinal virtue, and in no circumstances, perhaps, is it called into livelier exercise than in the instruction of youth. Where the pupil is docile and intelligent, and the lessons of the teacher are received and apprehended as quickly as they can be conveyed, we may, indeed, find little occasion for its wholesome restraint; but let the subject of our labours be idle or obdurate, or denied by nature that aptness of comprehension which is bestowed upon others, and prove unwilling or unable to admit into his mind those truths which appear so simple and clear to our own, we shall find, that to achieve the victory and attain the end in view there is need of patience. And in looking back to our own student days, we may gather many motives for patience as teachers from the memory of our former experience as pupils. We can recall the lightness and frivolity of youth, our impatience of restraint, and the difficulty which we found in applying our minds steadily to any subject of study; the impracticable appearance presented at first sight by some new branch of science, and the almost hopeless despair with which we may have turned again and again from the repugnant task of mastering its technicalities. These, and many similar remembrances, which recall the difficulties we have ourselves contended with, must awaken our sympathies in behalf of those whom we instruct, as well as serve to remind us of the kind words and patient forbearance of those teachers by whom we were chiefly animated and encouraged to vanquish these difficulties.

Various branches of science, and Medicine not less than any, prove distasteful to the *young* student, from the hard terms in which many of their facts are expressed, and the new and complex ideas which meet him at the very outset of his career. Much, therefore, will depend upon the patient explanations of his instructor, and the plain simplicity of his language, whether the pupil is at once discouraged and disheartened, or learns to find in those hard terms, when fully understood, a comprehensiveness of meaning which he did not suspect, and which tends to fix them indelibly in his memory. Nor let it be supposed that in thus adapting ourselves to the weakness and ignorance of others, there is any departure from real dignity, or ought of which a highly cultivated in-

telligence has reason to be ashamed. The most exalted minds, like the most perfect contrivances of human skill, are ever the simplest in their structure and operations; and Dr. Watts viewed it as no derogation to his lofty intellect, to descend from the heights of severest philosophy, that he might accommodate the truths of our holy religion to the capacity of *infant minds*.

But I must hasten to the conclusion of this part of my subject, and in doing so would advert for a moment to a question which, it humbly appears to me, is deserving of more attention from the instructors of youth, in our Colleges and Schools of Medicine, than it has usually received. *I allude to the intercourse maintained by the teacher with his pupil, and the influence exerted upon him beyond the walls of the lecture-room.*

It is too much the custom to regard the student as simply the occupant of the class-room,—to view the duties of the lecturer as limited to this circumscribed boundary,—and to consider, that when the pupil is removed from these precincts of learning, he is placed, not only beyond the pale of the instructor's authority, but alienated even from the sphere of his influence. I am inclined to view the matter in a different light. When a lecturer has to do merely with a promiscuous assembly, such as we see gathered around him of an evening, in our Mechanics' Institutes or Collegiate Schools, no doubt his duties usually terminate with the conclusion of his address; and he is neither supposed nor required to exercise any influence over his audience, beyond the limits of the brief hour which has brought them together. But the case is far otherwise in our schools of medicine: the pupils attendant upon our prelections are daily the same individuals, perhaps for a succession of months, and they look up to us as their guides and instructors in preparing for an honourable and most responsible profession. No doubt they regard us, in some measure, also, as examples of what a Medical Practitioner ought to be in the walk and converse of daily life; and it is, therefore, most desirable that we should bring to bear upon them, not only in the class-room, but out of it, whatever influence we possess, intellectual or moral, which is likely to elevate their characters as men, while it adds to their qualifications as Medical Practitioners.

I feel that in making these observations a question has been opened at once delicate and difficult; for while all who hear me will probably accord with the sentiments expressed, various opinions will be held as to the mode and manner, and even the possibility, of giving them effect. The

lecturer may do much to obtain a moral influence over his pupil by gaining a hold upon his affections, and this he may accomplish by many little acts of kindness and attention,—by inviting his confidence, by sympathising with his difficulties, and by entering into his future hopes and prospects in the world; in short, by presenting himself to the student in the character, not merely of his instructor, but of his friend. When circumstances admit of it, the pupil may be invited to his house, where, in the unreserved intercourse of social and domestic life, he may cultivate that acquaintance with his character and disposition which it is difficult to obtain in the more distant and formal etiquette of the class-room. And, above all, whether at home or abroad, in the privacy of his retirement, or in the exercise of his public duties, the instructor may seek to realize before his pupil, those principles, and that conduct, which he would desire him to follow; and thus bring to bear upon him, at all times, the silent but impressive influence of a good example.

In the few preceding remarks I have addressed myself chiefly to those who occupy the position of Teachers; and have endeavoured, however imperfectly, to individualize some of those features of character, the possession of which, in a greater or less degree, appears to me necessary to form a successful instructor of youth. Let us consider now, with equal brevity, some of those qualities which, with the same limitation, ought to, and must be found, in the successful student.

I confess, that to this portion of my theme I turn with peculiar pleasure. How many delightful memories of our early years are associated with the name of student; and how many kindly sympathies does it awaken towards those who are now entering upon that important period of their lives. Nor is the interest diminished by the recollection that, in a certain and wider sense, we all are students still; occupying, it may be, different stages on the path of knowledge, for in the growth of the mind, as in that of the body, there is the age of infancy, and manhood, and mature years; or, to compare it to the progress of the natural day, there is the dawning light, the brilliancy of noon, and the mellowed lustre of evening. But, whether engaged in gathering wisdom from the instruction of others,—or exercising our maturer faculties in reading for ourselves the book of nature,—or, out of the fulness of a well-stored mind, imparting the result of long years of patient thought and observation,—we are students still,—and hope to bear the honourable name

while life is spared, and opportunity afforded us to advance in knowledge.

To each pupil present, as being in this sense one of us, I now therefore turn, and entreat his attention to a few of those qualities which I hope will distinguish him while a member of this School, and the beneficial consequences of which he will reap, not merely in present success, but in the wholesome influence which they will exert upon his future years.

And foremost in the rank of student qualities I would signalize *diligence and perseverance*. The race, we are told, is not to the swift, nor the battle to the strong. It is not sudden flights of speed, or short and unsustained efforts of strength, which will in general obtain the victory; but far oftener the prize is grasped by him who slowly, but surely, pursues the even tenor of his way, and putting forth whatever vigour he possesses, presses forward, unrelaxingly, to the goal.

In the acquisition of intellectual as of material wealth, it is the hand of the diligent which maketh rich; and he who suffers not a day to pass without yielding its tribute to his growing store, will find, at the close even of a single year, that he has accumulated great riches. Even genius itself must submit to the dull monotony of labour, and share, in this respect, the ordinary lot of mortals. Hear the testimony of one, expressed in his own graphic and nervous phraseology, who himself exemplified, in an eminent degree, what genius, linked with unremitting diligence, could accomplish: I mean the late Dr. CHALMERS.* "It is by dint of steady labour—it is by giving enough of application to the work, and having time enough for the doing of it—it is by regular painstaking, and the plying of constant assiduities,—it is by these, and not by any process of legerdemain,—that we secure the strength and staple of real excellence. It was thus that Demosthenes, clause after clause, and sentence after sentence, elaborated, and that to the uttermost, his immortal orations. It was thus that Newton pioneered his way, by the steps of an ascending geometry, to the mechanism of the heavens; after which he left this testimony behind him, that he was conscious of nothing else but a habit of patient thinking, which could at all distinguish him from other men." As an additional quickener to his diligence, let the pupil consider also the importance of this period of his existence; the moments as they fly are dre-eminently to him "golden sands," of inestimable value, if rightly employed; but if suffered

to run to waste, or squandered upon unworthy pursuits, it will prove to him a loss, which the labours of a lifetime can seldom retrieve.

But while he is diligent, let him seek further to have *a method in his diligence*. There is, we are told, "a time for everything;" and he will turn that precious but fleeting gift to best account who apportions to each passing hour its own peculiar and appropriate work. Indecision and want of method as to the employment of time is a source of much daily waste; let the pupil, therefore, wisely and considerately arrange the periods for study and for recreation, and having laid down his plan, see that it is faithfully and vigorously adhered to. It is by the adoption of such common-place and routine methods as these that real excellence in knowledge is obtained; and dull and monotonous as they may seem, and irksome as they may be felt at first, let me assure my young friends that the consciousness of daily progress will speedily reconcile them to any self-sacrifice which this system demands.

But to diligence and method in his work the student must add *perseverance*; indeed the one is intimately connected with the other; for what is perseverance, but only a continuity of diligence? Rome, we know, was not built in a day; and the noblest monuments of human skill and genius, whether intellectual or physical, have been slowly raised to their proud elevation by many a painful and re-iterated effort. It is not the violence of the blow, but its frequent repetition, which carves the obdurate stone, and moulds the unyielding metal. Do not, then, allow yourselves to be discouraged by difficulties; nor, in contemplating any effort to be made, admit the word *impossible* into your vocabulary. What man has done, man may do!" was the aspiring maxim of a celebrated American Divine,* and one which he seemingly reduced to practice in whatever he attempted. Of this be assured, that you will rarely meet with difficulties in your career as students, whether in the branches of knowledge which engage your attention, or in your own minds, but what may be overcome by the exercise of a resolute and persevering spirit. Therefore, put your shoulder to the wheel in the confidence of success, and "Whatsoever thy hand findeth to do, do it with thy might."

Another feature in the student's character, of great importance, is *regularity of attendance upon the means of instruction*. In acquiring knowledge from the tuition of others, and especially if it is conveyed in

* Memoirs of the Rev. Dr. CHALMERS, by W. HANNA, LL.D., vol. iii., p. 11. Edinburgh: 1851.

* Rev. Timothy Dwight, LL.D., President of Yale College.

the form of stated lectures, which are each more or less portions of a system, the pupil, who has a due regard to his own benefit will not allow any break to occur in the thread of the narrative. He may, indeed, in some measure, supply the loss by private study, and such an excuse is sometimes urged for the neglect of regular attendance upon lectures; but he who thus reasons, will be found in general, to consult rather his own ease and convenience than his real profit. The fact of his attendance upon lectures is in itself a profession of his ignorance, as well as of his desire to be informed; and it is not to be expected that the desultory and, perhaps, careless reading of a young student, can supply the place of the condensed and methodised instruction to be derived from the lectures of one who is thoroughly master of his subject.

Besides, if the pupil once absent himself from his class-room from an insufficient cause, in all probability the neglect will be repeated on the plea of some equally trifling excuse; and thus are gradually formed those habits of idleness which have paralyzed the efforts, and blighted the prospects, of many a youth of promise. The beginning of evil, whether in small things or great, is like the letting out of waters, and the stream which, at its head, a pebble might have stopped, becomes, as it swells in its course, a sweeping and resistless torrent. Let me exhort my young friends then, to be regular in their visits to the class-room, nor suffer anything short of a very urgent cause to divert them from this good resolution.

But, in addition to the benefit to be derived to himself from regular attendance, it is a duty which the pupil owes to his teacher. The lectures to which he listens have been prepared for his instruction at the cost of much painful labour both of mind and body; and nothing can prove more discouraging to the teacher than the exhibition of listlessness, or indifference, on the part of a pupil, or to find the place vacant in the class-room which he ought to fill.

Under the present head I might have appropriately introduced some remarks regarding the importance of taking notes of the lectures which he attends, a practice which the pupil ought never to neglect, for the most retentive memory is too faithless to be trusted in matters of minute detail. I might also have made a few observations upon the character of the reading with which the pupil ought to accompany the hearing of lectures, and the manner in which it should be pursued; but these, and other matters of practical detail, have been so well handled in one of the introductory discourses already referred to, that

I shall not detain you by their further consideration; more especially, as the object proposed in this opening lecture has been rather to invite your attention to certain general principles, leaving the details, which are requisite in reducing them to practice, to be filled in by each individual, according as circumstances, and the natural bent of his mind, may suggest. Let us turn, therefore, to consider briefly another feature of greatest moment in the character of a successful student: I mean, *the cultivation and maintenance of habits of thought*.

The following maxims were early impressed upon my own mind, and I have found their practical value continually to augment through many past years of student life; and, for the benefit of those who are entering upon a similar career, I now repeat them. They are these,—“*Observe carefully;*” “*Read little;*” “*Think much.*”

It is not enough—and, indeed, I may say, that it is of little avail—that the pupil listens to the prelections of his teacher, and afterwards paces the wards of an hospital, regarding with curious eye the ravages which disease has wrought, if, when he has simply heard and seen, he considers that his work is done. It is, in fact, but then commenced, and the materials which he has gathered by in the eye and ear must be subjected to the analysis of patient thought.

If it be true, as the adage asserts, that once to write is twice to read, I feel assured that he who resolutely thinks over the subject of a lecture which he has heard, or the details of a case of disease which he has witnessed, will have acquired a more thorough acquaintance with the matter of each, than can be gained by any amount of reading or writing. Books we cannot always carry about with us, and writing materials require a suitable opportunity for their employment; but the brain—that active instrument of thought—is ever at hand, and during the waking hours of health is ready to put forth its swift and versatile powers at the magic touch of our volition.

Some pupils may be disposed to think that the more they can see in the way of their profession so much the better; and no doubt, when the mind is fitted by previous instruction, to know both how and what to observe, and these observations are made the subject of after-thought, he cannot see too much; but this is not the case at every stage of the pupil's career, and the young student will find that a little knowledge carefully considered is of more real value to him than any amount of indiscriminate learning, gathered in through all the avenues of sense.

In meditating upon what he sees and

hears of practical detail, the pupil's object must be to deduce, from these observations, certain general principles applicable to the varying circumstances and emergencies of health and disease; and these he can only work out for himself by the cultivation of a constant habit of reflection. Nor let him be discouraged, in seeking to attain this habit, by the difficulty which he encounters in restraining the roving of his mind, and in compelling his thoughts to run in the channel of his wishes. No doubt it is difficult, and, like all other habits of real value and utility, which are so often opposed to our natural inclinations, is only to be acquired by the exercise of a certain portion of self-denying effort. To be able to think, not vaguely and cursorily, but closely and well, is to hold in our power the mightiest instrument which nature has conferred upon us for the acquisition of knowledge; and often, it must be admitted, the only difference which we can discern between a wise man and a fool is this,—that the one has reflected upon what he has seen and heard, while the other has not.

The last circumstance to which I shall advert as characteristic of the successful student, is one which, unfortunately, cannot be described as necessarily appertaining to him, although it will assuredly distinguish the conduct of every one who has a due regard for his own interest and benefit. I mean, *choosing for his intimate companions those who are wiser and better than himself.*

Solomon tells us, that "he that walketh with wise men shall be wise;" and although, in the promiscuous communion of the classroom, the pupil must necessarily be brought into contact with many who do not possess this character, it is by no means needful that he should seek to unite himself to any such by the ties of *familiar* friendship. "Show me a man's friends," as some one has well and wisely remarked, "and I will tell you what the man is himself." Our character for good or for evil, for the better or for the worse, is deeply and lastingly influenced by the character of those whom we adopt for our associates; and, as the bent of man's depraved nature will ever induce him to follow the evil rather than the good, it is of the highest moment, to his comfort now, and his peace hereafter, that he should sedulously eschew whatever would tend to lead him astray, while he brings to bear upon his daily life whatever he feels would kindle his ardour and strengthen his resolution in following what is good.

There is no calamity which can overtake a young student, the results of which I so much dread, as his falling under the influence of bad associates; it conduces to

idleness, with all its attendant evils, and too often, alas! precipitates him down that fatal descent, the end of which we find described in these startling words,—*"The companion of fools shall be destroyed."* Let me then counsel my young friends, as they value their reputation, their peace, and their happiness, to walk with the *wise*. But, in addition to a judicious selection of companions, let me urge the pupil who is zealous for distinction, *to aim at a lofty standard of attainment.* It is the quaint but pithy remark of an old writer, that "he shoots highest who aims at the stars." Grovelling pursuits, and an indolent contentment with humble mediocrity, will never raise him to those heights of excellence to which he should aspire; nor let him be discouraged, if, while exclaiming in the fervour of his zeal, "*meliora peto proboque,*" he should at the same time be constrained to acknowledge, that in science, as in morals, "*deteriora sequor.*"

While diligent in the prosecution of his strictly professional studies, let him not wholly forget the light and adornment to be derived from some acquaintance with the science and literature of other departments of knowledge. To qualify himself, indeed, for the duties of a medical practitioner is and ought to be the *main* object of his labours; but the fulfilment of this purpose is not incompatible with the maintenance of those subordinate accomplishments which are becoming a gentleman, and a member of an intelligent social community. The study of medicine, as much, if not more than that of any other of the learned professions, holds out inducements to the acquisition of varied knowledge; for, independently of the benefit of a previous general education so much to be desiderated before entering upon the study of any special pursuit, the mere professional curriculum which is required for a degree demands an acquaintance with several branches of science—as Botany, Chemistry, and Natural History—which may usefully and agreeably engage the leisure hours of the practitioner in after years.

I would not be misunderstood as recommending to the pupil to distract his mind in the acquisition of a variety of superficial notions, or to devote to subjects wholly foreign to his profession any important part of that precious time which he will find only too short for all he has to learn; but I do recommend him, both as pupil now and practitioner hereafter, to cultivate a taste for *general knowledge*. For the lack of this source of mental interest and enlightenment, we see many in riper years sink down to the character of the mere professional drudge, whose ideas are circumscribed by the records of cases, and

whose fancy cannot soar beyond his potions and his pills.

But further, and finally, in looking forward to the practice of a profession which has for its object the mitigation of human suffering,—which introduces him into the privacy of domestic life, and lays open to his view the most secret thoughts and feelings of his fellow men,—let the student cultivate a deep sense of the responsibility of his position, and a humble reliance upon Almighty Power, to sustain and guide him in the delicate and difficult path which it will often be his lot to pursue.

It has been too much the custom, perhaps, in touching upon the subject of the medical profession in addresses such as this, to hold up to the student an exaggerated picture of its pleasures, its honours, and its rewards, and to conceal from his view the trials, the difficulties, and the discouragements, in which he will probably be called more largely to share. In the case of those who are dependent solely upon their practice for support, it cannot be denied that their career, especially at the outset, is often attended with much that is painful: the drudgery which must be undergone, both of body and mind; the trials to which a man of sensitive feelings will be subjected, from the rudeness of one, the meanness of another, and the ingratitude of a third; and the doubtful anxiety in which he may long be held as to whether he will succeed at all in earning a subsistence;—these, and many other kindred particulars which I forbear to enumerate, constitute a burden which many, I am persuaded, would never have taken up, had they known beforehand how heavy it was to bear. And even in more prosperous circumstances, when the avocations of the practitioner bring him chiefly in contact with the higher classes of society, and the pecuniary gains have become more abundant, there is still much anxiety to be endured, although it may arise from other causes than those which gave it birth in his earlier struggles; while, as servant of the public, he must be ever ready at its call to sacrifice his ease, and to peril his life, in ministering to those who may demand his aid.

But, having glanced at the shade, let us also look at the sunshine; for the picture has a bright side as well as a dark one; and in this, as in many similar circumstances, what the poet has so gracefully sung holds equally true:—

“The gloomiest day hath gleams of light;
The darkest wave hath bright foam near it,
And twinkles through the cloudiest night
Some solitary star to cheer it.

“Despair is never quite despair,
Nor life, nor death, the future closes;
And round the shadowy brow of care
Will hope and fancy twine their roses.”

Yes: the picture is not all gloom, and the practice of medicine has its pleasures, its honours, and its rewards, even in this life, such as every man possessed of an enlightened and rightly-constituted mind is able to appreciate; although to the selfish, the covetous, and the man of mere worldly ambition, they may oftentimes appear of but little value.

It offers not wealth in golden streams, but it presents the fair prospect of an honourable competence, and abundant opportunity of growing rich in deeds of benevolence. The ermine and the coronet are not likely to adorn the person or grace the brow of the medical practitioner; nor does he seek the honours which wait upon fame and public applause; but in his secret and silent ministrations—in the chamber of sickness, and by the couch of death—his office invests him with truest dignity; while, as the friend and counsellor of his patients, he may enjoy a reputation which the wise commend, and his own conscience approves. What the world calls pleasure may not attend his steps, and his unobtrusive path oft lies through scenes of suffering and of woe; but is there no pleasure, think you, in seeing the tear of gratitude tremble in the sick man's eye, whom he has soothed by his kindness, and benefited by his skill; in watching the glow of health kindling once more upon some pallid cheek; or the weary step of weakness giving place to the elastic movements of returning vigour? Yes: medicine has its rewards, more to be prized than any that wealth can purchase, or a world-wide fame bestow; and I envy not the man who is insensible to their value, nor deems them worthy of his most strenuous efforts to obtain.

Guided, then, by these principles, and exemplifying that conduct which I have endeavoured to describe, and animated by the hope which happily prevails in every youthful bosom, let the pupil devote himself to the study of his profession now, and anticipate the practice of its active duties hereafter; and, in looking back from the close of a busy earthly career, and forward in the hope of a blessed immortality, he will enjoy the peace which flows from the conviction that he has not laboured in vain, neither spent his strength for nought.

LETTSOMIAN PROFESSORS OF THE MEDICAL SOCIETY OF LONDON FOR 1851-2.

At a meeting of the Council of the Medical Society of London, held on the 3d of October, Mr. Hancock and Dr. Forbes Winslow were elected Lettsomian Professors for the Session 1851-2, in the room of Mr. Guthrie and Dr. G. O. Rees, whose term of office expires.

Original Communications.

ON THE
PHYSICAL DIAGNOSIS OF DISEASES
OF THE ABDOMEN.

BY EDWARD BALLARD, M.D.

Late Physician to the St. Pancras Royal General Dispensary, &c.

[Continued from page 281.]

Dilatation of the gall bladder and ducts—calculi of the gall bladder—Diseases of the pancreas—inflammation—cancer—displacement—Diseases of the spleen—displacement—signs of enlarged spleen—congestion—inflammation—cancer—hydatid disease—Diseases of the kidney—displacement—signs of renal enlargement—pyelitis—hydronephrosis—cysts of kidney—cancer—tuberculous disease—calculi—atrophy, &c.—Diseases of the ureter—Enlargement of the supra-renal capsule.

DILATATION of the gall bladder, when moderate in extent, and when the liver itself does not descend below the margin of the ribs, may only present, as a visible sign of its existence, a deficiency of depression beneath the margin of the right false ribs. When greatly enlarged, however, the fulness of the abdomen may, as in hepatic disease, become general, and then there may be added a special bulging of the lower ribs upon the right side, as well as a comparatively greater fulness of the whole right side of the abdomen. It produces also a palpable superficial tumour, whose situation will vary with its size, and with the position and size of the liver. When the liver has not materially extended beyond the margin of the ribs, the tumour is perceived either as a rounded projection beneath them, or, where the edge of the liver can be felt, deviating from its even lower margin. When small, it is commonly situated somewhere above the level of the umbilicus, and almost always to the right of the median line, but where there is much enlargement or descent of the liver, whether from the abuse of stays or from chest disease, the gall bladder of course descends with it, and may be found forming a tumour below the navel and at the middle line. Unless care be taken in determining its

relations, the nature of a tumour here, with the characters about to be noted, might be mistaken. Its size varies from being only just perceptible to one which may occupy a large part of the abdomen. It may extend from the right hypochondrium into the right lumbar or iliac region, and into the umbilical and epigastric regions on the one hand, while it may almost reach to the pelvis on the other. When not very greatly distended, the tumour may be readily defined to be pyriform in shape, the widest part downwards, and it may often be embraced between the finger and thumb. Its margin will feel evenly rounded, and its surface even, smooth, and polished. It sometimes presents a considerable amount of resistance to the fingers, but is mostly more or less elastic, and is, when large, soft and fluctuating; the readiness with which the fluctuation is felt depending on the thickness of the wall of the gall bladder, and of the tissues intervening between it and the hand. Gentle and continued pressure may occasionally overcome the obstacle to the exit of its contents, and it will consequently be felt to subside under the hand; but although the temptation to squeeze it be great, and the conviction perhaps firm that such pressure would be effectual to empty the sac, yet to give way to this feeling might result in the rupture of the bladder, thinned by the distension it has undergone. The position of the tumour does not vary with the altered position of the patient, remaining the same after he has been lying for any length of time upon his left side. Occasionally, however, though the tumour does not lessen or disappear, it may change its place a little. It has been occasionally observed to be most apparent when the patient lies upon the back, becoming less so on his assuming the erect or sitting posture. Percussion over the dilated gall bladder elicits a dulness continuous with the superficial dulness of the liver; where it lies in contact with intestine containing air, the "humoric sound" may be elicited, but to ascertain this the examination must be repeated at different times during the day, and with varying degrees of force. A dilated gall bladder may open by ulceration like an abscess upon the mucous or serous surfaces of the abdomen, in which case subsidence of the tumour will occur. Distended gall bladder is capable of

being confounded with abscess and hydatids of the liver. It is distinguishable from abscess by its quicker formation, its circumscribed and easily defined form, and, when it fluctuates, by this sign occurring throughout its extent, and often appearing coincidently with the tumour itself. On the other hand, hepatic abscess presents induration as a character of its tumour prior to its fluctuating; the soft and fluctuating spot is mostly surrounded by induration, and there is oedema of the integuments where pointing is about to occur. It is also likely to be confounded with hydatid disease of the liver, which may produce a circumscribed tumour in the same situation; it is distinguished from this, however, by its quicker growth, its pyriform shape, and perhaps by its more perfect fluctuation. The hydatid fremitus, if present, will show the existence of the parasites, but it will not follow even when this is ascertained that the hydatid disease is in the liver, as the gall bladder itself may in rare instances contain them.

Dilatation of the hepatic and common bile ducts has been known to produce swelling and tumour occupying the epigastric and right hypochondriac regions, extending below the umbilicus, and manifesting very distinct fluctuation at the most prominent part, a little below the ensiform cartilage and a little to the right of the median line.

Calculus of the gall bladder is not indicated by any of the signs of enlargement. When the bladder reaches the wall of the abdomen, and when at the same time the calculi are numerous and the parietes of the abdomen thin, it is possible that some calculous grating may be felt on pressure, or heard during strong expiration on application of the stethoscope. Suppurative inflammation may occur, and both pus and calculi be discharged upon the surface, or at the umbilicus. They may also make their way into the stomach or bowels; and be discharged by vomiting or stool. A single large calculus has been observed to found a solid and firm tumour apparently in the abdominal wall, through which it has made its way from the gall bladder by ulceration.

Diseases of the Pancreas.

The depth at which the pancreas lies from the anterior parietes of the abdo-

men renders the determination of its physical condition exceedingly difficult, and often quite impossible. Enlargements of the organ, however, are sometimes to be discovered, where emaciation has proceeded to some extent, but in order to be reached by the fingers the stomach must be empty, and the bowels recently and fully evacuated. Sometimes these enlargements are best felt when the patient is placed on the hands and knees.

Inflammation of the pancreas may produce a palpable tumour, deeply seated and obscurely felt at the epigastrium, but commonly no evidence of this condition is afforded by physical examination. It is more likely to be observed when abscess has occurred.

Cancer has been the cause of nearly all the pancreatic tumours which have been recorded. When involving the duodenum, pyloric extremity of the stomach, and meso-colon, there may be local projection of the abdominal wall. More commonly, however, the tumour is only evident to the touch. It is generally situated deeply somewhere above the umbilicus and near the middle line of the body, but when very large has extended crosswise to the right or left hypochondrium, or the right or left flank. It may not always but only occasionally be felt, according to the state of fulness of the stomach and colon. Its form may be rounded or flattened, and its inferior border may sometimes be distinctly circumscribed; its surface may be moderately smooth, or obscurely knotty or irregular: in all cases its fixity to the posterior part of the trunk is remarkable. In most cases it is the seat of a regular pulsation synchronous with the cardiac systole, and giving to the hand the idea of a hard substance being forced up by the beating of the aorta behind it. In a case recorded by Dr. Sandwith the pulsation was evident below the cartilages of the left false ribs, in consequence of the splenic artery being involved in the disease. An arterial bellows murmur is also commonly audible over the seat of pulsation. In a case of Dr. Fletcher's, this was heard in the recumbent posture only, but was inaudible when the patient was placed semierect: the epigastric pulsation was diminished at the same time, and there was no bruit audible over the spine. The position of the stomach and colon in front of the

tumour will occasion resonance over its seat. Where cancer of the pancreas involves the tissues surrounding the vena portæ and vena cava, there may be so much ascites as entirely to obscure the evidence of even considerable enlargement.

When the *head of the pancreas is displaced* downwards by the abuse of stays, and from the same cause the liver elongated in the same direction, the latter may exhibit over its dulness a palpable tumour due to the head of the pancreas between it and the lumbar curve. I have known such a tumour, apparently of the liver, to pulsate forwards and to transmit to the ear both sounds of the heart. The tail of the pancreas may be the displaced part, descending with a displaced spleen, so as to give the organ a vertical direction; the position of the spleen may be ascertained by palpation, and where symptoms of strangulation coincide it is well to recollect that this displacement of the pancreas may accompany it, and be the strangulating cause. In all probability, however, it would be too much concealed by the distended intestinal convolutions to be recognised in its new position by any physical signs.

Diseases of the Spleen.

Displacement of the spleen is of no uncommon occurrence. Wherever it may be, its dulness will on the most careful and repeated exploration be found wanting over its accustomed seat. If the displacement be upwards, its dulness will be found higher up on the side of the chest, as occurs when pressure is exerted on it by gaseous or fluid accumulations in the abdomen. When displaced downwards it may be found as a palpable tumour as low even as the left iliac region, and unless adherent in its new situation will be moveable, and may even alter its position somewhat with changes in the posture of the patient.

Signs of enlarged spleen.—According to the size and position of the organ, there will be visible more or less fulness of the corresponding part of the abdominal wall, palpable also to the hand passed over the left side of the abdomen. The fulness may engage the left hypochondriac and epigastric regions, and the left lower ribs may be bulged outwards. When very large, the whole of the abdomen may protrude, the pro-

minence of the left side still visibly exceeding that of the right. The prominence of the wall may be rendered still more apparent by the gravitation of the tumour on placing the patient on the hands and knees. On measurement, the left side of the trunk will, according to the height of the tumour, be equal to that of the right, or may exceed it. According to the size of the organ also, the movements of the left side of the abdomen and of the lower ribs will be restrained. When only enlarged to a small extent, the spleen produces no palpable tumour, but, as it increases, its lower extremity is to be felt, on pressing upwards beneath the margin of the ribs a little posterior to the vertical line of the nipple, as a rounded surface which is perceived to be somewhat moveable. The regular increase of the spleen in all directions renders it practicable to infer from the portion felt the whole bulk of the organ. Where there is much more enlargement, the tumour it occasions is perceived resisting the hand as far forwards as the median line, and downwards as far as the ilium, and to be placed very superficially. When very large, it may lie obliquely across the abdomen, and even be felt in the right flank and iliac fossa, as well as in the corresponding regions on the left side; the descent and altered position of the organ arising from gravitation permitted by the character of its peritoneal attachments. It is also readily moveable by the hands, and its weight may be estimated by causing it, on altering the position of the patient, to rest upon them. Its form is mostly oblong, and its surface smooth. Its anterior edge, which is commonly very easily defined, is sharpish, and mostly feels notched and fissured, the fingers being capable of being introduced beneath it. I have known it descend quite into the pelvis, and extend upwards from it as high as to the margin of the ribs on the left side, its upper margin being palpable and irregularly lobulated. In this case it resembled an ovarian enlargement. I have, however, never known it rise as high on the right side as on the left. The resistance to the hand occurs over the whole surface of the palpable tumour, and is never crossed by a yielding portion. The consistence of an enlarged spleen varies: it commonly feels quite hard, but sometimes gives rise over its extent of resistance to a sense of flue-

tuation, on manipulating in the manner employed to elicit this sign in ascites. It is distinguished, however, from the fluctuation of fluid by a push given with the flat hand to the tumour on one side being perceived on the opposite as the impulsion of a solid body. According to the height to which an enlarged spleen rises into the chest, it destroys the tactile vocal vibration, and may raise the seat of impulse of the apex of the heart as high as the fourth intercostal space. A pulsation may be occasionally felt in a splenic tumour as in a hepatic tumour, by communication from the aorta behind it. In cases of moderate enlargement it can only be detected by percussion, which will be dull over all the parts where it comes in contact with the wall. When there is palpable tumour and the organ is not displaced, its dulness will extend upwards to the left, to become continuous with that over the natural seat of the spleen, no intestinal resonance ever intersecting it. Sometimes the dulness rises high up upon the wall of the chest. A continuous venous murmur is sometimes heard over an enlarged spleen; a common seat of it is at the right edge of the tumour, below the xiphoid cartilage. In a case in which I observed it, it was increased in loudness with each inspiration and each systole of the heart, and was accompanied by a palpable thrill. I have also met with a murmur accompanying each arterial pulse in the left iliac region, where the enlarged organ has extended so low as this. Where splenic enlargement encroaches upon the left chest, it destroys the respiratory murmur over its situation, while an exaggerated breath sound may become audible over the infra-clavicular and supra-scapular regions. It is very common for enlargement of the spleen to be coincident with enlargement of the liver; the former cannot then take so oblique a position as it might otherwise have done, and a non-resistant sulcus may be felt between the organs, which will allow a finger or more to lie in it, and which is resonant on percussion. I have sometimes found this sulcus absent, and the edge of the liver overlapping and obscuring the anterior edge of the spleen; in this case the abdomen has presented a tumour reaching quite across it from one side to the other. The line of union of the two organs may then be judged of by careful

palpation of the lower edge, when two notches may be felt,—that to the right being the interlobular notch of the liver, and the next to it passing towards the left being the result of the juxtaposition of the edges of the two organs. Enlargement of the left lobe of the liver may be confounded with an enlarged spleen: it may be distinguished by tracing its dulness to be continuous into the right hypochondrium, and by tracing down its lower edge, by percussion and palpation, in a curve towards the right side.

Congestion of the spleen often produces only such an amount of enlargement as is discoverable by percussion, but where it has been frequently repeated, and become chronic, or accompanied by *hypertrophy* of the tissue, it is indicated by signs of great enlargement. In simple congestion, rapid variation in the size of the organ, as measured by percussion, may be noticed under the operation of remedies. Where the organ has become greatly increased by congestion, palpation should be gently performed, and not repeated unnecessarily, since it becomes sometimes so soft as to burst under trifling pressure, or even sometimes spontaneously. The resistance offered by muscular contraction often renders it impossible to determine the consistence of the tumour.

Inflammation of the spleen may terminate in abscess, which is commonly unrecognised until it has burst and evacuated its contents, which it may do into any of the situations where hepatic abscess may burst. It has been known to burrow between the layers of the abdominal parietes, and point and burst at the umbilicus. When bursting into the serous sacs it will produce the same signs as would be produced by a similar amount of liquid in the same situation.

Cancer of the spleen is a rare affection, in which the enlargement is less regular than in the other forms of disease, the form of the organ being more or less altered. It may, indeed, not be materially enlarged at all, but, when it does form a palpable tumour, its surface will be found to be uneven and nodulated, and on percussion the outline of the dulness will not represent the oval form of other simpler kinds of enlargement.

Hydatid disease of the spleen cannot often be distinguished from the develop-

ment of hydatids in the folds of peritoneum about the organ, especially in the gastro-splenic ligament. Its irregular form, however, will distinguish it from the ordinary enlargements, while it is distinguishable from cancer by the greater evenness of the surface, or, if the latter present elevations, by the greater similarity in their size. When present, the hydatid fremitus will be distinctive.

Diseases of the Kidney.

Displacement of the kidney.—This may occur independently of disease of the organ itself. As in displacement of the spleen, its dulness will be wanting in its natural situation, unless it be conjoined with enlargement of the spleen, or liver, or of the supra-renal capsule. One form of displacement I have already alluded to in which it produced a palpable moveable tumour on the left side, partly covered by the cartilages of the ribs. A more common displacement, however, is that towards the pelvis, and the organ may form a tumour by lying entirely in the iliac fossa; for the most part, however, it is only the lower end of the organ which can be felt there. The peculiar form of the organ can sometimes be felt, and enables the observer readily to recognise the nature of the tumour; its position, however, is in these cases commonly altered; the upper portion of the organ is depressed, and the hilus is felt directed upwards. Healthy kidneys, which lie low enough in the loins to be manipulated, may be occasionally so loosely connected by their surrounding cellular attachments as to be capable of being moved up and down by the observer to the extent of an inch or so along the side of the spine.

Signs of renal enlargement.—In the minor degrees of enlargement, such as occur in *congestion* and some forms of *inflammation of the kidney*, no external sign is presented to the eye; but careful palpation, as directed for the discovery of the healthy organ, will, if the circumstances are favourable, discover the lower part of it broader and more prominent than in health, and sometimes descending to a little lower level. When, however, the kidney is more enlarged, as in pyelitis, cancer, &c., it may come to occupy no small part of the entire space devoted to the abdominal organs.

It then produces visible enlargement of the abdomen, which may present itself as a fulness, or bulging, in the seat of the affected kidney,—in the flank, lumbar region, and iliac fossa, or even protruding the lower ribs: general abdominal enlargement may be conjoined. The lumbar enlargement is best seen on comparing the two sides, as the patient sits on a chair, or leans on the hands and knees; it is, however, the last direction in which bulging occurs, on account of the greater density and resistance of the tissues which constitute the abdominal wall on this side of the kidney, and may be absent even in great enlargement. When the enlargement is great it is not uncommon to see the superficial veins of the abdomen enlarged on the affected side. The bulging of the abdominal wall is not only visible, but may be felt, and its limits tolerably traced, by sliding the hand over the surface; and on pressure a palpable tumour becomes perceptible in the same situation. It may extend forwards as far as to the median line, or even beyond it; upwards it may become lost far under the ribs, while downwards it may enter the iliac fossa, and be traceable backwards to the spine. It is fixed to the loin, is readily definable anteriorly and inferiorly, does not present a sharp edge, but is oval or rounded in its general contour, sometimes presenting an indentation at its anterior part. The consistence and character of the surface varies with the nature of the enlargement. A yielding portion is commonly received at some period on the surface of the tumour, which sometimes is so marked, either lying vertically along the tumour or crossing it more or less obliquely, as to give rise to the idea that there are two tumours in place of one. This is due to the intestine which lies in front of it, and the deception is similar to that which I have noticed as of more rare occurrence in the case of the liver. A renal tumour sometimes pulsates. The dulness on percussion extends over all the surface which is in contact with the enlarged kidney, posteriorly, laterally, and in front, where it encroaches upon the resonance of the moveable intestine. The colon, however, which lies in front of the organ, is not pushed aside, but, according to its degree of gaseous fulness, produces a resonant note in front of the tumour. On aus-

cultating over the organ, the gaseous sound of this portion of the bowel may also be heard.

Pyelitis, with consequent purulent distension of the kidney, which occurs in calculus of the organ, presents in its advanced stages the signs of large renal tumour, at first resistant, tense, and somewhat elastic, but becoming softer without losing its ready definition: at length it fluctuates, the fluctuation being at first deep-seated and obscure, but becoming daily more and more distinct. It does not vary at all with the position of the patient. The enlargement once perceived steadily advances, assuming the oval form, the surface being smooth and even at first, but presenting at its full growth moderate elevations. When large, it can extend even to the iliac fossa and hypogastrium. It sometimes produces visible fulness of the loin. There is no discolouration of the surface externally. The dulness of the tumour is sometimes separated from that of the liver by the resonance of the transverse colon, but in other cases their dulness is continuous, the renal tumour adhering to the liver and pushing away the colon. The dulness may extend downwards as low as to Poupart's ligament, while the liver or spleen are so far pushed upwards that their dulness is made to encroach on the resonance of the chest.

Hydronephrosis produces the same signs as pyelitis, the physical condition of the organ, with the exception of the character of the distending liquid, being similar in the two diseases. The tumour may attain the large size of the uterus in the last months of pregnancy, and its surface always presents marked rounded elevations. The tumour is of slower growth than that from purulent distension. The diagnosis must mostly be made upon other grounds than those arising out of the physical examination.

Cysts of the kidney may be either *simple* or *hydatid*. A simple cyst may exhibit all the signs of enlargement of the kidney. Like other tumours, it may appear divided; and even fluctuation, apparent enough in one direction, may be inappreciable in another. It may be so large as to cause protrusion both of the lower ribs and of the ensiform cartilage. It does not present the lobulated form of hydronephrosis or pyelitis. Hydatid disease occupies its position in

the lumbar space, and presents most of the characters of the ordinary fluctuating tumours of the kidney; the only physical sign by which it can be distinguished from them being, under favourable circumstances, the perception of the hydatid fremitus.

Cancer of the kidney may appear first as a tumour in the right hypochondriac region; and, in its advanced stages, it commonly occupies a little higher level than that from pyelitis, although it may extend quite as low towards the pelvis. Like other forms of disease, it may appear as two distinct masses. It often appears rather as a tumour growing from the under surface of the liver (when on the right side) than as one of the kidney; in other cases it can be traced by the hand slid over the surface as passing beneath it; the margin of the liver being felt as a softer substance in front of the tumour, and overlapping it. Its surface is irregularly tuberculated; the elevations being larger than those of pyelitis or hydronephrosis, and projecting far above the general surface of the enlarged organ. It is solid and elastic to the touch; sometimes, however, obscurely fluctuating, especially when much blood enters into its composition. It may produce fulness in the loin, and enlarged veins are more common in connection with it than with other renal tumours. The dulness on percussion may rise as high as the sixth rib on the left side, extending downwards from this point to the crista ili. When it is thus large it causes encroachment of the diaphragm upon the chest, and corresponding physical signs.

Tuberculous disease of the kidney very rarely arrives at a size sufficient to form a renal tumour.

Calculi of the kidney have been said to give rise to a fremitus or sense of crepitation on pressure; but although, both as a palpable and stethoscopic sign, it should be kept in mind and sought for, yet it is evidently of very rare occurrence.

Atrophy of the kidney, such as occurs from *granular disease*, is marked by a diminished extent of the natural renal dulness; but, so difficult is this to detect at the bed-side, that the sign becomes virtually valueless.

Renal diseases, accompanied by enlargement, are capable of being confounded with diseased conditions of other organs whose physical signs have

been described, the cause of which is mostly a similarity in the situation of the tumour. On the right side the difficulty lies in distinguishing renal tumours from *enlargements of the liver* and gall-bladder; and, on the left side, from enlargements of the spleen. The former is by far the most difficult, since the liver is little less fixed than the right kidney, and is very commonly the seat of the same form of disease; besides which, the renal tumour may be entirely obscured by an enlarged liver overlapping it. The distinction upon which the greatest reliance is to be placed, and which, in the majority of instances, will be found applicable, is the existence of the signs which palpation, percussion, and auscultation, severally afford of the presence of a portion of the colon in front of the tumour. It is very rarely indeed that this sign is present in hepatic, or absent, at one time or another, in renal tumour. Careful palpation, also, will commonly enable the observer to trace back to the spine the renal enlargement, while the fingers can be insinuated between it and the ribs, and sometimes detect the edge of the overlapping margin of the liver. Its more superficial character will also aid in distinguishing a dilated right kidney from the hydatid tumour of the liver, which otherwise greatly resembles it. The capability of its being traced back to the spine by the hand and by percussion will also distinguish a fluctuating tumour of the kidney from that of a *distended gall bladder*; in addition to which, the very superficial position of the latter, and its smoothness and pyriform shape, are distinctive characters. From an *enlarged spleen* it is distinguished by its anterior margin being rounded, in place of being sharp and notched—by the position being vertical in place of tending to the oblique—and by its fixity posteriorly in the loin, in place of a more anterior position and more or less mobility, and by the resonance of the colon anteriorly, &c.

Thickening and dilatation of the ureter may occasionally be perceived by careful and deep palpation over its course. When distended with urine, the tumour has been observed to have an elastic feel, and its contents to be capable of being discharged by pressure into the bladder. When not thus distended, it is perceived to be hard, cord-like, and somewhat moveable. It has been no-

ticed to pulsate also, by transmission of impulse from the iliac artery.

The supra-renal capsule may be so much enlarged as to produce palpable tumour in the situation of the kidney, displacing this organ and occupying its seat. This, however, is of very rare occurrence. A case is recorded by Rayer in which the colon occupied its normal position in front of the tumour, which thus, from its physical signs, could not be distinguished from the kidney.

42, Myddelton Square.

[To be continued.]

DR. RAMSBOTHAM'S REPORT OF CASES

THAT OCCURRED IN THE EASTERN
DISTRICT OF THE

ROYAL MATERNITY CHARITY.

[Continued from page 668.]

DURING the year 1847 there were delivered in the eastern district of the Royal Maternity Charity, under the superintendence of Dr. F. H. Ramsbotham,

1746 women—of which cases

21 were twins—one in about every 83 cases; of these, in 10 cases both heads presented; in 8 the presentations were head and breech, or inferior extremities; in 1 both were breech; in 1 the first foetus presented with the head, and the second with the shoulder; and in 1 the first presented footling, and the second with head, hand, and foot; in 7 of these cases the children were both boys; in 8 both girls; and in 6 one girl and one boy.

938 children were males.

829 children were females.

1731 were presentations of some part of the head; of which 4 were face presentations—one in about every 441.8 births.

33 were presentations of the breech or some part of the lower extremities—one in about every 53.6 births; of these, 11 were twins.

3 were transverse presentations—one in every 589 cases; of these, 1 was the second of twins, and passed alive, doubled at full time; the other 2 were both turned at full time—1 living, 1 still.

In 1 the placenta was entirely, and in

2 partially implanted over the os uteri—one in every 582 cases. In all three instances the children were turned, and they were all still-born. Each of the mothers lost a considerable quantity of blood, but they all recovered.

6 were complicated with dangerous hæmorrhage before delivery—not the result of placental presentation; one in every 291 cases. All the children were born naturally after the artificial rupture of the membranes—4 dead, 2 living. All the mothers recovered.

In 8 cases the placenta was retained within the uterus, either by atony or irregular contraction of the uterine fibres, or by morbid adhesion between the placental and uterine surfaces, so as to require the introduction of the hand for its removal—one in about every 218·3 cases. One of these cases was after the induction of premature labour; and with all of them there was more or less hæmorrhage: but the women all recovered, and none of the other cases presented any peculiarity.

3 were complicated with alarming hæmorrhage after the natural expulsion of the placenta—one in every 582 cases. All of them terminated favourably.

2 women were delivered by craniotomy—one in every 873 cases. In one of the cases perforation was had recourse to in order to facilitate the extraction of a dead foetus through a small pelvis; in the other there was extreme rigidity of the os uteri, together with a tumour in the pelvis, the contents of which were first evacuated by a trocar. It was the woman's first child, and she had been in labour four days when delivered. She had a slight attack of hysteritis after delivery, but recovered perfectly, though slowly. In a few months a tumour appeared at the right side of the lower abdomen, for which she was received under my care into the London Hospital, and which was evidently ovarian. This has remained in the same condition, without increasing, until this date. The woman has not been pregnant again, and neither tumour, enlargement, nor thickening of structures, can be detected by the vagina. She has the appearance of a person in health, with the exception of a rather prominent abdomen.

1 woman was delivered by the long forceps, in consequence of slight contraction of the pelvic brim. The child was living, and the mother recovered.

3 were delivered by short forceps, 1 in every 582 cases; 2 of them in consequence of failing uterine action, and the other from a tumour in the vagina impeding the passage of the head. All the children were born living, and all the mothers recovered.

2 were complicated with puerperal convulsions, 1 in every 873 cases. In one case the child was turned, after the mother had been in fits for 21 hours. They ceased immediately upon delivery, and the patient did well. In the other case the child was born naturally, and this woman also recovered. Both children were still-born.

In 1 premature labour was induced in consequence of contracted pelvis; the child was still-born, and it was necessary to remove the placenta from the uterus by the hand. The mother recovered.

5 women died within the puerperal month, or from puerperal causes—being one in 349·2 cases; only 3 of them, however, as a consequence of labour; or one in every 582 cases.

1705 children were born living.

62 were still-born—being one in 28·5 births.

Of the Deaths,

1 was from collapse three hours after delivery, without any apparent cause.

1 was from pelvic inflammation 15 days after delivery. The woman had had a lingering labour with a first child.

1 was from peritonitis on the 9th day after the delivery, by turning, of a still-born transverse foetus.

1 was on the third day from low fever brought on by want.

1 from chronic phthisis a week after delivery.

Of the still-born children,

20 were premature: of these 9 were putrid, 6 were twins, and 5 were the offspring of mothers who had never given birth to a living child. In one case premature labour had been artificially induced.

8 were putrid at full time, or nearly so.

9 were breech presentations: of these 2 were premature, and 1 was premature and putrid.

1 was a transverse presentation.

2 were delivered by craniotomy.

1 was under complete placental presentation.

2 were under partial placental presentation.

4 were after dangerous accidental hæmorrhage.

3 were under lingering labour.

4 were monstrous: of these 2 were premature, one of them having two heads, four arms, and two legs.

With 2 the funis prolapsed by the side of the head.

1 was after the mother had suffered a severe shock from fright.

2 were under convulsions.

3 were at full time, or nearly so; head presenting, not putrid, nor delivered by art.

ON THE
EFFECT OF CHLOROFORM
IN PRODUCING A FORM OF MUS-
CULAR CONTRACTION

ANALOGOUS TO THAT OF RIGOR MORTIS.

BY WM. FREDERICK BARLOW, M.R.C.S.
Resident Medical Officer to the Westminster
Hospital.

THE influence of chloroform on the brain, the spinal cord, the sentient nerves, the motor nerves, and the muscular fibre, embraces, as I need not say, some of the most interesting and important physiological and pathological questions; and despite the observations made upon the subject it abounds in matter for fresh enquiry.

My present object is to ask attention to a *special* mode of action of chloroform on the muscular fibre, which seems to me highly illustrative of the phenomenon of rigor mortis.

It has been shown by Nysten, in his ingenious researches, that a long time intervenes, as a general rule, between dissolution and this peculiar rigidity, during which time the muscles remain irritable; and that the rigor does not approach until the muscular irritability is either completely or nearly extinguished. This is, of course, a main fact. All kinds of muscular action prove the irritability of muscles, except rigor mortis; this, on the contrary, is a form of contraction which prevails not until muscular irritability is lost. After *excessive voluntary* action, such as that of the hunted animal, which though exhausted to the utmost, still runs for life, and forces to contraction muscles

become almost too languid to respond effectually to any stimulus, however violent, rigor mortis has been commonly noted to ensue with unusual rapidity. As Nysten says, "c'est parceque l'action vitale du lièvre que le chasseur a forcé est, pour ainsi dire, épuisée par une fatigue excessive, que cet animal se roidit en mourant.* So, too, *extreme involuntary* muscular contraction has been known to lead to the swiftest possible death-rigor. And it is very probable that the exhaustion of muscular irritability after death by galvanism would be found to hasten the phenomenon.

These things considered, what would seem more probable than that *any* agent possessing the power of lessening or destroying muscular irritability should have also the property of expediting rigor mortis?

Now nothing so rapidly and effectually subdues this irritability as chloroform; and it has been observed, that animals destroyed by it have become almost instantly rigid.† I have watched frogs die most speedily from its vapour, and in these, after death, have failed to produce muscular action by a galvanic force which might have been expected to powerfully operate; in this state rigidity rapidly came on. Death by chloroform is peculiar; it is most rapid, but in every sense most absolute; let it be compared to other forms of dissolution which leave the muscles unimpaired in irritability, and wherein rigor mortis is long deferred. Do *human* subjects who die of chloroform stiffen with unusual rapidity?‡ It is most important that this question should be answered. This case may be imagined: a person might be destroyed by chloroform, and being

* Recherches de Physiologie et de Chemie pathologiques, p. 405.

† Dr. Tyler Smith has described this circumstance as it occurred in frogs. In some experiments of Dr. Marshall Hall's the like event was observed. Dr. Snow informed me that he has produced a similar state of rigidity by injecting the arteries of a limb with chloroform.

Since writing this, I have been favoured by a note from Dr. Snow, in which he says,—"I found that by injecting chloroform, ether, or alcohol, into the aorta of cats and rabbits immediately after death, the irritability of the muscles was instantly destroyed, and the post-mortem rigidity came on within about five minutes, and lasted for an unusual time."—See the last vol. of MEDICAL GAZETTE, p. 626; and Part ii. of my Observations on the Muscular Contractions which occasionally happen after Death by Cholera, MED. GAZ., 1850.

‡ This would, I suppose, greatly depend on the quantity which circulated before death.

found rigid, a medical practitioner might *consequently* infer that death must *necessarily* have happened some hours. I need not say that in many kinds of medico-legal inquiry the *time* of dissolution is a principal point on which acquittal or conviction turns.*

How long might the body of the deceased have remained warm is an occasional question raised in investigation. But, under other circumstances, the inquiry might be,—how long may rigor mortis be deferred? or, how rapidly may it happen? It would be as well to ask ignorance itself as a medical witness, considering the too neglected subject of rigor mortis for the first time.

But let me proceed to the experiments, which are very simple:—

I. I took a frog and wrapped it in wet lint, quite covering every part except one of the lower extremities. This I put into a glass tube, at the bottom of which were a few drops of chloroform, so that the limb was freely exposed to its vapour, which was of course prevented from escaping. In a very few minutes the limb was in a state of most perfect rigidity, and looked much as in confirmed rigor mortis. Then I withdrew the leg and uncovered the animal. It was somewhat drowsy from the narcotic; but yet it was obscurely conscious, and crept languidly along, trailing after it the rigid limb, which looked like a dead thing attached to a living. The part was, I need hardly state, quite anæsthetic and lost to volition.

II. I repeated the experiment with the same result, so far as producing rigidity was concerned; but the animal was so affected as to be unconscious. Soon after it appeared about to rally, but breathed at very distant intervals, and in the end relapsed and died.

III. A frog was decapitated, stripped of its skin, and exposed to chloroform vapour. The muscles gradually started into full view, the toes became outstretched and separate, and perfect rigidity ensued in less than four minutes.

IV. A frog was exposed after the same manner to the vapour of ether. The result was similar, but more gradually effected. It was observed that the muscles on both sides were *symme-*

trically influenced, precisely as they are always in rigor mortis.

In these experiments the heart remained still pulsating after the removal of the head; and the chloroform to *some extent* circulated through the blood, though, from the hæmorrhage and shock sustained, feebly. But the continuance of the circulation was by no means *necessary* to the production of that influence of chloroform on the fibre which I would here exemplify: on the contrary, we may believe rigidity to be retarded even by a slow and feeble blood-current. In the following instances the heart was removed, after decapitation, before the chloroform was employed, in order to show more fully the *direct* influence of this agent on the muscular fibre. The spinal marrow was also destroyed previous to the trials.

V. A frog—the brain, spinal marrow, and heart being removed—was divested of its skin completely. I then placed one of the lower extremities in a glass tube and exposed it to the vapour of chloroform. It became almost instantly rigid, whilst the remainder of the body continued as lax as possible. It is of consequence to note that the vapour acted far more rapidly in this instance than in a former one, *in which the same part of the perfect animal, with the blood still circulating through it, was similarly treated.*

VI. The same experiment was repeated, and with the anticipated consequence. It was curious to watch the *distinct movements* induced by the establishment of the rigidity. First one toe was extended, then another, then the next; and so forth, until the web of the foot was put wholly on the stretch.

The change of position which may be found to take place from the occurrence of rigidity is very remarkable; and its degree is greatly or altogether owing to the swiftness with which the irritability is destroyed, and the rapidity and violence wherewith the rigor happens. In the following experiment, wherein a perfect frog was exposed to chloroform, that the degrees whereby rigidity approaches might be watched, the alteration of attitude was extremely striking. In order that such alteration may be seen to the full, the hind legs of the animal should be flexed during the period of its becoming rigid.

VII.—A frog was exposed to some

* Dr. A. Taylor was very lately examined on this matter at a most important criminal trial, the issue of which was very much determined by his able evidence.

chloroform vapour: soon it became unconscious; but, on narrowly observing it through the glass covering under which it rested, I could every now and then see the faintest possible respiratory movement, and also trace occasional, languid beatings of the heart. Soon the latter were hardly discernible from their weakness, and the circulation must have been brought to extreme feebleness; and then I observed a slight movement of a lower extremity, quickly repeated, which gave notice of the commencement of rigor mortis. In a minute or two the pulsations were altogether imperceptible, and probably had ceased, and the manifestation of rigidity became much plainer. Peculiar, slow movements were seen from time to time; and it might, at least, have been thought that their effect in altering the posture of the frog would be insignificant. But it was far otherwise: soon the extensors became quite rigid, and so contracted that the bent legs became straightened to the utmost; and the toes, which lay side by side, were seen to diverge and expand to full tension the web between them. The head was drawn upwards, and the spine arched as in *opisthotonos*. The whole position would have seemed changed by some one sudden and violent spasmodic action, had it not been noted accurately to be the aggregate effect of movement following movement.

I have only performed one or two experiments on warm-blooded creatures, with the view of producing the same kind of muscular contraction after the cessation of the circulation.

VIII. A recently killed sparrow was stripped of its skin, and exposed to chloroform vapour. I was prevented from observing the effect of the trial for three-quarters of an hour; but, at the expiration of that time, I found the bird most completely rigid.

IX. The leg of another destroyed sparrow was exposed to chloroform vapour: it became rigid in about three minutes.

X. A mouse, decapitated, deprived of its skin, and suspended in the vapour of chloroform, was made quite rigid in about ten minutes. A very gradual but most evident alteration of the position happened, and the spine was arched forwards in a striking manner.

In performing these experiments I

have suspended the animals in a glass jar where I wished to affect all the muscles, and employed a common test tube where I only desired to influence those of a limb. The vapour of about half a drachm of chloroform will be quite sufficient so to impregnate the air of a closed quart-jar as to bring about the condition described; but the celerity with which it happens bears, of course, a due relation to the amount of the vapour, which, when much concentrated in a test-tube, will be found to act very rapidly.

It can hardly be necessary to observe that the form of contraction thus produced by chloroform is to be well distinguished from that rigidity of muscle which commonly takes place from the administration of this agent during surgical operations. The former implies the *loss* of irritability, whilst the latter distinctly denotes its *presence*; the former is always a persistent, whilst the latter is oftentimes a most transient act; in the former the fibres are seen to be affected universally and alike, whilst in the latter the action is often extremely partial; the former is constant, and can be produced at will, whilst the latter is of uncertain event, and cannot be occasioned at the wish of the experimenter; the former is a purely *physical* effect, whilst the latter is frequently of *psychical* origin, being due to the emotions of dreaming, or delirium, or of the waking state. But it is superfluous to pursue the obvious contrast; for life and death are not more different than these two kinds of muscular contraction.

MONUMENT TO JENNER.

A CIRCULAR has been sent to this country, from England, inviting the medical profession, and others, to contribute towards the construction of a bronze monument to the memory of that distinguished benefactor of the human race, Dr. Edward Jenner, to be erected in London. The circular is admirably drawn up, and the appeal certainly powerful; but if the monument could be in one of our own cities, or a duplicate of it, more enthusiasm would be felt about it in the United States. The subject has been brought before the Suffolk District Medical Society, and steps will probably be immediately taken to obtain the aid which is required.—*Boston Medical Journal*.

MEDICAL GAZETTE.

FRIDAY, OCTOBER 24, 1851.

AN inquiry of a very painful nature has been instituted during the last week at the BIRMINGHAM GENERAL HOSPITAL, regarding the alleged professional misconduct of Mr. Baker, one of the Surgeons of the Institution.

It appears that Mr. Gutteridge, a Surgeon of Birmingham, and a Governor of the Hospital, felt himself irresistibly compelled by moral considerations to raise what amounted to a charge of manslaughter against a professional brother. He published this charge in a pamphlet about six weeks since, and the document has no doubt been widely circulated in Birmingham and its neighbourhood. Mr. Baker is simply accused in very plain language of having improperly operated on a young female for the removal of an ovarian cyst when tapping should have been resorted to. We are told that adhesions existed, and that the cyst was violently dragged from the abdomen by the rash operator. The inexpressible pain which Mr. Gutteridge must have inflicted on his feelings in bringing such a serious charge against another, when he himself was not present at the operation, may be more easily conceived than described, especially when he thus closes his graphic account of the case for the benefit of the public in general, and the Birmingham Hospital in particular:—

“The scene has been *described* to me by persons who were present: they say that no language they could find would adequately describe the harrowing spectacle. Men inured to trying scenes, and exercised in the dreadful duties of operative surgery, were horror-stricken at the *hideous barbarity* which they *saw* perpetrated. There lay the ghastly sufferer—if sufferer she can be called—who

endured all these inflictions while in a state of suspended consciousness from chloroform,—there lay a tender young woman, apparently lifeless, with *her belly cut open*, and weltering in her blood. She did not die on the table; she lived till the next day.”

After reading such an exciting description as this, we can imagine the anxiety of women, young and old, to become inmates of the General Hospital at Birmingham! In the first page of his pamphlet, Mr. Gutteridge professes to be instigated by a desire “to reinstate the credit and repute of the hospital;” and he probably contemplated a considerable increase in the number of Governors, when he had thus candidly, and upon hearsay statements, laid bare to public gaze the hideous barbarities practised by one of the surgeons, and coolly witnessed without remonstrance by the others.

In another case Mr. Baker is charged with having improperly tied the carotid artery for what he considered to be an aneurismal tumour of the *arteria innominata*. He proposed the “distal deligation” of the two great arteries. “He tied the carotid artery, and *killed the man*.”

Here, again, is an overflow of professional charity:—

“In all these cases,” observes Mr. Gutteridge, mildly, “there is an absence of those qualities without which a remorseless experimentalist, brandishing the knife, is more mischievous than a wild Indian *running amuck* with his tomahawk, while there is present an amount of mind of which the maddened savage is bereft, and which constitutes the reckless surgeon *guilty of manslaughter*. He intentionally perils human life where the principles of science and experienced counsellors forbid him; and, with just skill enough to break into the bloody house of life, in scorn of all the restraints of conscience, prudence, and humanity, *slays the unhappy creatures* committed to his charge.”

These published statements, which bear upon them the stamp of gross

exaggeration, have naturally induced the Governors to institute a very rigorous investigation into the charges. The report of the evidence covers ten closely-printed columns of the Birmingham Journal. We are unable to find space even for an abstract of the inquiry; but, as the charges thus raised by one professional man against another are likely, unless refuted, to have a damaging effect on professional character generally, we think it right to append to these remarks the conclusions at which, after due inquiry, the Weekly Board have arrived:—

“Firstly.—The charges made by Mr. Gutteridge against Mr. Baker, as stated partly in the pamphlet and partly before the Board, were—That Mr. Baker, in the month of May last, performed the operation of ovariectomy upon Rachael Mayou, a single woman, stated by Mr. Gutteridge to be about twenty-two years of age (but who was in fact between eighteen and nineteen years of age), “without a knowledge being imparted to her of the very great risk she ran,” and “she even appeared to have the operation performed upon her without her consent at all;” and that no communication of the nature and danger of the operation was made to the parents of the patient.

“Secondly.—That the operation was performed unscientifically and improperly, and that she died from maltreatment; and this part of the charge was accompanied by a statement in the pamphlet of circumstances which were said to have occurred during the operation, and which will be hereafter adverted to.

“Thirdly.—That the operation was performed against the opinion, if not against the protest of the other surgeons of the hospital.

“FIRST CHARGE.—As regards the first charge, the Weekly Board are of opinion it has been satisfactorily established that, from the communications made to the parents of the patient, and the patient herself, by Mr. Baker, Dr. Bell Fletcher, the chaplain, and the nurse, that the parents and the patient were fully informed of the nature and danger of the operation, and that it was performed with their consent. It fur-

ther appears that the chaplain afforded religious consolation to the patient, with especial reference to the serious character of the operation. It was also acknowledged by the parents that they expressed no dissatisfaction respecting the operation until the appearance of Mr. Gutteridge's pamphlet, about four months after.

“SECOND CHARGE.—As regards the second charge, the Weekly Board are of opinion that the operation of ovariectomy was performed with great skill, care, and humanity, and that the death of the patient could not be attributed to any other cause than the uncertainty which is known to exist in this as well as in other capital operations. The surgical and medical evidence, and authentic statistics, which have been laid before the Board, have proved that the operation of ovariectomy has of late years attracted great attention in the profession, has been more favourably received than formerly, and has been attended with increasing success. Ample proof of these results will be found in the evidence and authorities referred to. Much discussion took place upon the merit of tapping as compared with that of ovariectomy, and whether tapping ought not to have been resorted to in this case; but the Board do not feel called upon to enter into this part of the subject after the opinion they have above expressed.

“THIRD CHARGE.—With reference to the charge that the operation was performed against the opinions of the other medical and surgical officers, it appears to the Weekly Board that Mr. Baker did not take means to convene a meeting of his colleagues, and in formal consultation obtain their opinion upon the operation previously to its being performed. The board regret that this course, though not required by the statutes and rules of the hospital, was not adopted in a case of such difficulty and importance; at the same time, the board are not prepared to say that there may not be cases in which a surgeon would be justified in taking upon himself, and perhaps ought to take upon himself, with the consent of the patient and friends, the responsibility of an operation, even against the opinion of his colleagues. The Board are, therefore, of opinion that as the patient might, if the operation had succeeded, have been restored to good

health (as in authenticated cases laid before the Board), that the operation was, under all the circumstances, justified. The Weekly Board are also of opinion that Mr. Gutteridge has failed to substantiate, as he alleges in his pamphlet, "that Mr. Baker proceeded to the operation in high contempt of the united opinions of the senior surgeons and his wary colleagues." It appeared to the Weekly Board that Mr. Baker, by the course of examination he pursued, wished to show that at the time the operation was performed he considered he had the sanction or concurrence of Mr. Wood, Mr. Crompton, and Mr. Amphlett, from what was said by Mr. Wood, and by assistance rendered for the moment by Mr. Crompton and Mr. Amphlett, and by all these gentlemen being present; but the Weekly Board do not consider that the circumstances which took place established that conclusion. The Board, at the same time, state that Mr. Gutteridge failed to substantiate his charge that the above gentlemen "by standing aloof, gave the most emphatic protest against the whole proceeding." Mr. Gutteridge states in his pamphlet, "The operation was commenced, and some little advance being made, it was discovered there was adhesion of the cyst to the surrounding parts. It was now suggested the operation should be abandoned, and that the opening that had been made should be closed. If this had been done all might have been well. But no; with his characteristic wilfulness, and against the plainest dictates of reason, Mr. Baker persevered. After raking among her entrails for a long, dreary, dismal, agonising hour, he dragged out the cyst, but not before such a vast quantity of blood had been lost as made it expected she would momentarily expire. The scene has been described to me by persons who were present; they say that no language they could find would adequately describe the harrowing spectacle. Men inured to trying scenes, and exercised in the dreadful duties of operative surgery, were horror-stricken at the hideous barbarity they saw perpetrated. There lay the ghastly sufferer, if sufferer she could be called, who endured all these inflictions, while in a state of suspended consciousness from chloroform—there lay a tender young woman, apparently lifeless, with her belly cut

open and weltering in her blood. She did not die on the table; she lived till the next day." Mr. Gutteridge entirely failed in proving that any suggestion was made that the operation should be abandoned, and the opening closed; and with respect to the manner in which the operation was performed, and the circumstances which he has detailed as accompanying it, and his charges against Mr. Baker, of barbarity and cruelty, the Weekly Board are unanimously of opinion that all and each of the above allegations and charges are utterly without foundation.

"FOURTH CHARGE.—That he had rashly and cruelly treated a poor old man, by improperly tying the carotid artery in a case which he took for aneurism of the arteria innominata. The evidence in this case showed that the symptoms during life were of a nature to render it uncertain what was the precise nature and extent of the disease. Had it been aneurism, as the symptoms led Mr. Baker to suppose, the operation would have been a proper one; but from the discrepancies in the surgical evidence, the Board think Mr. Baker would have taken a better course in not performing the operation without the concurrence of his colleagues. The operation was very skilfully performed, and there is not the slightest ground for imputing rashness or cruelty.

"With respect to the question of consultations: the Board think that it will be advisable to request the Medical Board to consider the manner in which they are conducted, in order that the opinions of the medical and surgical officers may be ascertained in a more formal manner than at present, and that the regulations agreed upon should be laid before the Weekly Board.

"The Weekly Board cannot close this report without unanimously expressing their strongest condemnation of Mr. Gutteridge's conduct towards the governors and subscribers, in not having communicated to the Weekly Board the circumstances which led him to believe that one of the surgical officers had misconducted himself, as soon as those circumstances came to his knowledge, and before he brought them before the public, interspersed with virulent attacks upon that gentleman's professional and private character, which he has failed to substantiate.

"The Weekly Board are unwilling to

separate without recording their unanimous opinion that Mr. Baker is entitled to retain the full confidence of the governors and subscribers.

“(Signed)

“DARTMOUTH, Chairman.

“This report will be submitted to the governors and subscribers, at a special meeting, to be held on Friday, the 31st instant.”

It is much to be regretted that such serious charges should have been made upon such frivolous and untenable grounds. We know nothing of Mr. Gutteridge, Mr. Baker, or the Governors of the General Hospital, and can therefore give an unbiassed opinion from a perusal of the evidence. The worst enemy of the charity could not have adopted a more effectual plan to damage it in the eyes of the public than that pursued by Mr. Gutteridge on this occasion—namely, to rake up charges of barbarity and cruelty upon hear-say statements. The reputation of no hospital surgeon would be safe if the colouring given by an over-heated imagination were allowed to influence the description of an operation.

Reviews.

A Practical Treatise on the Diseases and Injuries of the Urinary Bladder, the Prostate Gland, and the Urethra. By T. D. CROSS, M.D., Professor of Surgery in the University of Louisville, &c., &c. 8vo. pp. 726. Philadelphia: Blanchard and Lea. London: Delf. 1851.

THE author of this treatise informs us that he has for many years felt the want of a full and comprehensive account of the diseases and injuries of the Bladder, prostate gland, and urethra. The only British works of this character, of which mention is made by Dr. Cross, are those of Sir B. Brodie and Mr. Coulson, but these he observes are mere outlines. The present treatise is intended to fill up the void that he considers exists in medical literature. The following ana-

lysis may show how far this object is attained:—

An “Introduction,” consisting of five chapters, contains the anatomy of the perineum, urinary bladder, prostate gland, and urethra; with a brief chapter on the urine, its physical properties, and morbid varieties.

Part 1 treats of diseases of the bladder; including, malformations and imperfections; injuries of the bladder; inflammation; chronic lesions; nervous affections; heterologous formations; fungus, erectile, and other morbid growths of the bladder; worms in the bladder; serous cysts and hydatids; foetal remains in the bladder; hair in the bladder; air in the bladder; hæmorrhage; retention of the urine; incontinence of urine; hernia of the bladder; urinary deposits; stone in the bladder; and foreign bodies in the bladder.

Part 2 includes the diseases of the prostate gland—viz., wounds, inflammation, abscess, ulceration, hypertrophy, atrophy, scirrhus, encephaloid, colloid, melanosis, tubercle, cystic disease, hæmorrhage, calculi, phlebolites.

Part 3 embraces the diseases and injuries of the urethra—*e. g.*, malformations and imperfections, laceration, stricture, polypoid and vascular tumours, neuralgia, hæmorrhage, foreign bodies, infiltration of urine, urinary abscess, fistula, false passages, lesions of the gallinaceous crest, and inflammation and abscess of Cowper’s gland.

From the enumeration of the contents of this work, it is seen that gonorrhœal and syphilitic diseases do not find a place therein. With these exceptions, we are willing to admit that Dr. Cross has performed for the urinary organs “what has been so well done by Lawrence and Mackenzie for the eye, Hope for the heart, Budd for the liver, and Curling for the testis.”

We must not, however, dismiss so large and important a work with a mere statement of its contents: we must, by a few extracts, enable our readers to judge more closely of its character.

The following introductory observations to the section on scirrhus of the bladder may be taken as an example of the author’s erudition, and serve to evince the pains he has taken in collecting the materials of his work from the labours of other writers, as well as from the stores of his own clinical observations:—

"Scirrhus of the bladder, properly so called, is of such infrequent occurrence that many pathologists have been induced to deny its existence. Mr. Travers, in a valuable paper on malignant diseases, in the seventeenth volume of the *Medico-Chirurgical Transactions of London*, remarks that he has never met with true scirrho-cancerous ulceration of this viscus. Mr. Howship, Sir Benjamin C. Brodie, and Mr. Coulson, in their works on the urinary organs, hardly allude to the subject. Mr. Mayo, in his *'Outlines of Pathology,'* is equally silent; and so is Mons. Begin, the author of an elaborate article on cancer, in the *'Dictionnaire de Médecine et Chirurgie Pratiques.'* Similar testimony is borne by Dr. Walshe, in his excellent and learned paper upon this subject, in the *Cyclopædia of Practical Surgery*, published under the superintendence of Dr. Costello, of London. From all this it may be inferred that the disease in question is exceedingly rare. I have myself witnessed only one case of it in a practice of nearly twenty-five years. Dr. G. L. Bayle, of Paris, in his *Posthumous Treatise on Cancerous Maladies*, speaks, it is true, of this affection at considerable length, describing its symptoms, diagnostic characters, causes, and pathological effects; but, as he has given no cases of it, we are left in doubt as to whether it is really scirrhus or some other disease. That the lesion is occasionally propagated to this organ from neighbouring structures—as the rectum and prostate gland in the male, and the uterus and vagina in the female—is familiar to every physician. My own practice has furnished me with a number of instances of it in both sexes" (p. 239).

To illustrate the author's practical opinions we quote the following remarks with reference to the external, or, as it is called, perineal, division of stricture of the urethra:—

"The operation is by no means free from danger, and requires the most consummate skill for its successful execution. None but a madman or a fool would attempt it unless he had a profound knowledge of the anatomy of the parts, and a thorough acquaintance with the use of instruments. Of all the operations of surgery this is the least to be coveted" (p. 649).

Dr. Cross does not express this strong opinion without some grounds. He has himself performed it in one case in which the patient was much relieved for a time; but, in consequence of neglect to use the catheter, a relapse gradually occurred, and the symptoms became as bad as they had been before.

In another case which the author witnessed, "several hours had been spent in idle efforts to reach the bladder; the operation was abandoned in despair; the patient was unbound and put to bed, and, in two days after, he was carried to his grave. Such a case needs no comment; it speaks for itself," and, adds the author, "I shall never forget it." A third case is related by Dr. Cross, in which the operation was followed by violent rigors, with severe inflammation of the parts; and the patient was in a critical position for some days. The wound did not completely heal by the adhesive process, and several fistulous openings existed when the patient was seen by Dr. Cross, more than a year after the operation.

The accompanying comment by the author must, in fairness, be given at the same time:—

"Fortunately such an operation can seldom, if ever, be required. It was certainly not necessary in one of the cases referred to above. It is only when the stricture is situated in the membranous portion of the tube, and is impermeable to the bougie, catheter, or lancetted stylet, that it can ever be proper. Under such circumstances it would be far preferable to puncture the bladder—the only resort, according to some, when the disease is attended with retention" (p. 650).

The estimate of the advantages of a new and dangerous operation thus formed by so experienced and learned a surgeon as the author of this work, may wisely be admitted among the proofs that great caution, to say the least, should be observed in selecting the cases in which this proceeding is to be adopted as the only means of cure.

A close examination of this treatise proves it to be something more than a mere compilation or reproduction of scattered facts from the surgical literature of Europe. The author has manifestly brought, to long experience and clinical acquaintance with the diseases of which his work treats, an extensive and intimate knowledge of American, British, and foreign medical literature. The result has been the production of an elaborate and comprehensive treatise on a class of diseases the information regarding which has certainly not before been so efficiently collected as in the work now recommended to the notice of our readers.

Memorials of James Mackness, Esq., M.D. Edited by the Author of "Brampton Rectory," &c. Small 8vo. pp. 265. London: Churchill; and Hatchard. 1851.

THAT a volume possessing any interest should have been composed out of the materials afforded by the ordinary events of the life of a medical practitioner, may be regarded as sufficient evidence that biographical history is emphatically the philosophy that teaches by example. The importance of this philosophy is truly acknowledged by all, although its study be neglected by many. As it is forcibly expressed by a profound writer:—"Man's sociality of nature evinces itself, in spite of all that can be said, with abundant evidence by this one fact, were there no other: the unspeakable delight he takes in biography. It is written, 'the proper study of mankind is man;' to which study let us candidly admit, he, by true or by false methods, applies himself, nothing loath. 'Man is perennially interesting to man; nay, if we look strictly to it, there is nothing else interesting.' How inexpressibly comfortable to know our fellow creature; to see into him, understand his goings forth, decipher the whole heart of his mystery; nay, not only to see into him, but even to see out of him, to view the world altogether as he views it; so that we can theoretically construe him, and could almost practically personate him; and do now thoroughly discern both what manner of man he is, and what manner of thing he has got to work on and live on!"*

Such, indeed, is almost the only merit of the "Memorials" now before us; they present to us a fair picture of the real man as he lived and moved among us. The *authoress* has preserved the salient points of character, and has composed an interesting narrative of difficulties surmounted by perseverance, amid sickening hopes, anxieties and troubles; of bodily suffering endured with patience and submission; and of provincial celebrity ultimately achieved;—a narrative, which if the events were in every case recorded, would form the biography of the majority amongst us. It is not, however, because the subject of this sketch may not have been one of the mightiest

men, one of the giants of the earth, that his biography may not be useful now that his earthly race is run. Every man in his own sphere has influences, either for good or evil, of some sort. This is a fact too often unknown or forgotten; but, nevertheless, an indisputable and irrevocable fact—the word or the deed that has gone forth of us, forms an atom more or less potent in the inscrutable world of God's Providence; therefore it behoves us to act as those who shall give account, or of whom account shall be taken, whether or not we are willing to surrender it.

It has seldom been without some good result that the life of a good man has been written. It has been said that "the good a man does dies with him, his evil deeds live after him." This saying, however, falls short of the truth; for both good and evil live after the doer, and survive in the common aggregate of happiness or woe, truth or falsehood, that posterity inherits. No true or good deed ever failed to reach its suitable position in the harmonious whole of beauty and order; no falsity or sin ever rested until it reached its final doom: while in the meantime it has served to swell the mass of mundane misery and wrong.

Let, then, the example here set before us, with the natural eloquence of affectionate partiality, be to us a beacon to follow what is good, and shun what is evil. Dr. Mackness was not merely one of the countless myriads who have bravely toiled along the up-hill path of a professional life, but he was one who strove to adorn the medical character by literary and scientific acquirements; he was ever a student, not only, be it remembered, of God's works, but also of the revealed Word of God. Indefatigable in the duties and interests of his calling,—skilful, kind, vigilant, sagacious,—he was beloved as a physician, respectable as an author, devout as a Christian, and perfect in his private relations.

Imperfect as we all are, we can but ill afford to spare one who had so few failings. But, while we may not doubt the Wisdom which is to us inscrutable in his removal, we cannot but believe that good will result from the memory of an earnest and faithful labourer diligently doing the work that was set him to do.

We commend this "memorial" most

* Critical and Miscellaneous Essays, by Thos. Carlyle. Vol. iv., p. 1.

sincerely to our readers' attention; although we must add our wish that the matter had been entrusted to the hands of a less warmly interested editor than is here before us; we think that the biographical sketch of Dr. Mackness might have proved more serviceable to the members of his profession had it been drawn by a professional hand. There are in every life many circumstances of little import to others, which nevertheless appear important to those immediately interested; while general results and influences, less obvious to the actors, are observed by the looker-on.

Proceedings of Societies.

NEWCASTLE AND GATESHEAD PATHOLOGICAL SOCIETY.

August 1851.

DR. CHARLTON communicated the following
Cases of Purulent Infection.

The cases we are about to bring forward this evening are not so much remarkable on account of their individual peculiarities as for the connection that may, we think, be traced between them as resulting from a single cause. It is now, we believe, generally acknowledged that erysipelas and puerperal fever may be reciprocally produced; that, in the words of Dr. Murphy, of University College, they are convertible diseases, which may be conveyed either directly from patients, or indirectly by means of the medical attendants and nurses. We have met with numerous examples where a surgeon, after attending a case of erysipelas, has been terrified by the sudden appearance of several cases of puerperal fever in the females he attended in childbirth; and, on the other hand, it has often been recorded that the nurses and attendants on a case of puerperal fever have been attacked with dangerous and fatal erysipelas. That erysipelatous contagion was the cause of death in one of the fatal cases we have here to record, there can, we think, be little doubt; but the converse proposition, that the puerperal condition, or rather purulent infection after delivery, produced erysipelas and rheumatic fever in the other parties affected, will be less easily proved, though we own ourselves to be convinced of such having been the case.

As the full record of all the various symptoms observed in the eight cases here alluded

to would occupy too much of the time of the Society, we have endeavoured to abbreviate the details, and to present only the most remarkable features of each case.

Mrs. M. *æt.* 31, of full habit and powerful frame, was confined on the 17th of December, 1850, of a healthy child. Her confinement was unattended with any abnormal symptoms, except that the lochial discharge was for a considerable time extremely fetid; and she suffered, as she had done for two months before her confinement, from irritation at the neck of the bladder. She soon recovered so far as to get down stairs, when, about the end of December or the beginning of January, she was attacked with shiverings, and became much depressed in spirits. She attributed the rigors to having stood in a passage exposed to a draught of air from an open door. Twenty-four hours after the rigors first came on, copious perspiration followed, and the feverish symptoms partially subsided. The teeth of the lower jaw now became very tender, and a large swelling formed at the root of one of the molars of the right side; this did not suppurate, though for some days it appeared as if it would do so, and then gradually subsided. As it disappeared, and about a week after the first rigor, another similar attack of shivering, depression, and loss of appetite, occurred. Eight days after this she began to complain of pain in the right thigh and in the back, and soon after a copious menstrual discharge came on, though she still was suckling her infant, and had a plentiful supply of milk. Mrs. M., however, had always menstruated regularly while suckling her children. The pain in the right thigh, which was not accompanied with any perceptible swelling, continued for some days, and shortly after she complained of pain in the left side immediately below the ribs, extending back from thence to the spine. This was soon accompanied with cough and shortness of breath, and the pulse rose to 120. The pain abated under the internal administration of calomel, antimony, and opium, with blisters applied to the affected part; but the affection then shifted to the left thigh, and after remaining fixed there for a few days more, it migrated to the left arm, and then in a day or two ceased altogether, while the secretion of milk was gradually arrested at the same time.

On the 6th of February, 1851, the pulse again rose; she perspired copiously during that and the following day, and complained of great debility and loss of appetite. At this time it was observed that she had a remarkably heavy, sunken look, and was depressed in spirits. On retiring to rest about 10 P.M. on the 7th of February, she suddenly fell down on the bed in what was

at first supposed to be a state of syncope: the pulse became extremely small; the respiration slow and laboured, though not absolutely stertorous; and there were frequent relapses into syncope. Stimulants were now administered, but could only be swallowed by half-teaspoonfuls at a time, as otherwise they constantly got into the trachea, and produced threatenings of asphyxia. The head and neck were covered with copious perspiration. About one A.M. she vomited a quantity of undigested food, and after that was less faint. Paralysis of the left leg and arm was first observed on the evening of the 8th, twenty hours after the first attack, previous to which time she had moved both arms and both legs freely. The subsequent symptoms of this case were those of apoplexy; the left arm and leg never recovered their power; and though, by active treatment, the immediate danger was obviated, she lingered in a most melancholy condition, both as to mind and body, for five months, when she sunk apparently from debility without any fresh apoplectic seizure. We have been particular in the details of the earlier symptoms of this case, because at our first seeing the case about mid-day on the 8th of February, it was the unanimous opinion that the cause of the symptoms was probably some purulent infection remaining in the system after delivery, till the more decided apoplectic phenomena supervened some hours later.

The condition of Mrs. M. required, of course, the closest attendance from all parties; but due attention was paid to cleanliness, and to the due ventilation of the large airy apartment in which she lay.

On the 14th of February one of Mrs. M.'s children, æt. 6, who had never been in his mother's sick room, was attacked with sore throat and high fever, with vomiting and headache. It was thought that he was about to take scarlet fever; but after several days the symptoms subsided, though he remained unusually weak and delicate for some time after.

The mother of Mrs. M., Mrs. B., æt. 54, a woman of very strong constitution and great powers of enduring fatigue, had passed twelve days and nights at the bed-side of her daughter, hardly taking any sleep during that period. At the end of this time, or about the 19th of February, Mrs. B. began to complain of sore throat, with swellings of the glands of the neck, with much restlessness, and some tendency to low wandering delirium during the night. There was also severe pulsating pain of the head, a furred tongue, and an exceedingly fœtid breath, followed by nausea and vomiting. These symptoms soon assumed the form of erysipelas, the inflammatory action commencing about the right ear and over

the mastoid process of that side, and thence passing over the scalp and towards the neck. Mrs. B. was ill for about a fortnight, when the inflammation subsided, and she slowly recovered her strength. During her illness, the husband of Mrs. M., a strong, healthy man, of almost gigantic frame, and who had hitherto enjoyed excellent health, had taken the place of Mrs. M.'s mother in attending on his wife. From the commencement of Mrs. M.'s illness he had rarely enjoyed a night of refreshing sleep, and had, as might naturally be supposed, suffered intense mental agony and anxiety. About the 17th of February, or nearly at the time that Mrs. B. first became ill, he began to complain of swelling and pain in the right side of the fauces, so as to make the act of deglutition difficult: the fauces on that side were red, but there was little fever or loss of appetite. By the 21st of February his throat was much better, and he resumed his attendance on his wife, and remained for nearly forty-eight hours at her bed-side, lifting her repeatedly, and shifting her position, as she was extremely restless, and seldom remained more than a few minutes without requiring to be moved. At the end of this time he became completely exhausted, and now complained of pain on the opposite side of the fauces, which on examination were found to be red and swollen as before. He now became extremely alarmed about himself, and was impressed with the idea that he would not recover. There was at this time but little fever, but deglutition was almost impossible, and the countenance was depressed and anxious, and the skin assumed an unusually earthy aspect. On the evening of the 24th of February, the bowels being slow, an enema was ordered for him. Shortly after it had been administered he became dreadfully agitated and alarmed at the idea that he had made use of the same instrument that had been employed for administering injections to Mrs. M., and told his medical attendant that he had undoubtedly imbibed some poison from this source.* Being assured that this was not the case, he became calmer, and said that a great load had been taken off his mind, and that he should now get better, for that his sore-throat was entirely gone, and that he could now swallow without difficulty. In the night of the 25th, however, high fever came on; the respirations were doubled in frequency; the pulse was 140, full, but very compressible; and the restlessness was greater than ever. He now said that he felt no pain whatsoever, and no longer exhibited any anxiety about

* During this period of anxiety he had severe rigors, and was extremely restless.

his condition, and even expressed surprise at his being so extremely restless. The fauces were of a livid leaden hue, but exhibited no signs of gangrene; the tongue was furred, and the breath extremely foul; the skin was rather hot; there was frequent retching and nausea; the respiration much hurried; and the peculiar leaden or earthy discolouration of the skin was more strongly marked: there was likewise intense thirst. The chest was most carefully examined, but not the slightest abnormal change could be detected in the lungs or heart. He had but little cough, and this seemed to be chiefly occasioned by a thick, ropy mucus, which was secreted about the fauces. On the evening of the 26th, the bowels not having been opened all that day, $\frac{3}{4}$ ss. of castor-oil was given, which produced three liquid and somewhat light-coloured stools. From this time Mr. M. became deadly cold; the skin was covered with cold perspiration; the pulse continued at 140 and 150, but became gradually smaller and smaller, in spite of all restoratives that were used, till it was no longer felt at the wrist, and he sank at 12 A.M. on the morning of the 27th of February.

About the 20th of March, a sister of Mrs. M., aged 33, who had been in close attendance on the invalid, and likewise upon Mrs. B., was attacked with swelling and pain of the glands of the neck. In two days after this a well-marked rheumatic affection came on; the ankles and knees swelled, there was fever and intense pain on moving the affected joints, with copious acid perspirations. The affection was of the kind termed synovial rheumatism by Dr. Watson, and amended after five days' use of lemon juice; but it was more than a month before Mrs. E. was restored to health.

One of the nurses, after five days' attendance upon Mrs. M., was in like manner attacked with swelling and pain in the glands of the neck, followed by a complete rheumatic affection, which was both more prolonged and more severe than in the case of Mrs. E.

A young girl, æt. 18 , was engaged to assist the nurses in their arduous task, and frequently assisted in changing the linen, and in moving Mrs. M. from one bed to another. At that time she had a slight scratch or cut on one finger, which, two or three days after she commenced her duties, inflamed, and this was attended with low irritative fever. The hand and arm swelled immensely; suppuration came on very slowly, but a good deal of pus was evacuated when incisions were made. She eventually, after nearly five or six weeks of illness, recovered, but was left in a condition of extreme debility.

The woman who waited upon this girl for about ten days was seized a few days after going home with erysipelatous inflammation of the throat, with pain of *the back and sides of the neck*, and with muscular pains over nearly all the body; she had low fever for about ten days; pulse from 80 to 90 and rather weak, and she regained her strength very slowly.

The house where this melancholy catalogue of diseases occurred was a large and airy building, situated in an elevated spot. The impression first made upon our minds on seeing Mrs. M., and which was also the opinion of her usual medical attendant, was that the patient's symptoms arose from purulent infection after delivery. The gradual progress of these cases has been well described by Puzos, and by Sedillot, nor have they escaped the attention of English writers. In many instances, the poison, if we may so call it, tends to form deposits of pus in various organs, and particularly in the pelvis near the broad ligaments of the uterus, from whence they sometimes point externally in the groin, or discharge themselves into some viscera. The case, however, soon ran on into genuine apoplexy; but it would appear that the poison still remained in the system, and infected many of those about the patient. Mrs. M.'s case was one of those described by Mr. Travers, and others, and especially commented upon by Mr. M. B. Gallwey, in his excellent observations on asthenic or unhealthy inflammations. In nearly all the patients the affection began with pain and swelling of the throat, and then branched off into the various forms of erysipelas, erysipelatous sore-throat, and rheumatism.

In the month of April, Mrs. M. was attacked with severe pain in the paralysed thigh; the veins were evidently inflamed, and, in fact, the medical attendant described it to me as a complete attack of phlegmasia dolens. Was this the last effort of the poison which had so long been circulating in her system?

Dr. WHITE exhibited specimens of *Bright's Disease of the Kidneys and old adhesion of the Pericardium*.

The patient from whom they were taken was a tailor, æt. 31 , who had led a very dissipated life some years before his death. He was admitted into the Infirmary with some patches of rupia syphilitica on his body, was greatly emaciated and broken down, appeared to be unusually stupid and slow in his intellect, and complained of the debility with giddiness, headache, thirst, and the usual accompaniments of the feverish excitement dependent upon syphilitic poison and dissipation. He said he

had always been in very good health up to a month before his admission. Some light nourishing aliments, and gentle stimulants with an aperient, were ordered, but on the second day he had become partially comatose. When roused he could speak rationally, but dozed over again as soon as he was left alone. Suspecting that there might be renal disease, and that the head symptoms depended upon blood vitiated with urea, his urine was examined, and found to become almost solid on the addition of nitric acid, from the great amount of albumen it contained, while the microscope showed unequivocal signs of the detritus of Bright's disease. Blisters were immediately placed over his loins and neck, and sharp purgatives administered, but without avail, as the coma became complete, and he died on the fifth day after his admission.

The kidneys were extremely small, and presented very fine examples of the old and atrophied kidney of long continued Bright's disease. The pericardium was also found completely adherent to the heart by old and fine adhesions, evidently of many years' duration; the heart itself was neither enlarged nor otherwise diseased.

It was curious, that with kidneys which must have been diseased for so many months, if not years, that he should never have experienced any of the characteristic symptoms. On looking at the kidneys, a mere anatomist would have been at a loss to imagine how a person could have lived so long with them, for the true secreting structure was almost gone. The case illustrates in a striking manner the insidious and masked progress of the form of renal disease; running on to a surprising degree of degeneration without symptoms, and terminating by what may be termed serous apoplexy, without dropsy or any of those marked symptoms which enable an ordinary observer to detect the true cause of the malady. The total adhesion of the pericardium to the heart does not appear to have been at all injurious to the due performance of the heart's duties, as has indeed been often found to be the case where the adhesion is complete in all parts, with the layer of lymph very thin and membranous.

Mr. W. H. FIFE communicated the particulars of a

Fatal Case of Injury to the Brain.

He had been requested by a surgeon to make an autopsy on a man who had received a punctured wound of the upper eyelid, from the point of a small walking stick. The man had betrayed few or no symptoms of the wound having extended further than the orbit, until the fifth day after the accident, when slight coma set in,

and notwithstanding treatment, he sunk on the 6th. On examination of the wound after death, it was found to have passed upwards through the æthmoid and its cribriform plate, into the anterior lobe of the brain, extending as far as to the centre of the optic thalamus. Except for a few lines around the course of the wound the substance of the brain was perfectly healthy, presenting no marks of inflammation or softening, which he supposed must have been the reason for the surprising exemption from all symptoms of injury to the brain, for so long a period after the infliction of the wound.

Mr. DENHAM communicated the following case of

Foreign body in the Larynx,

and exhibited the specimen.

On the 3rd or 4th of July, 1851, I was sent for to visit a child in North Street, South Shields, who was reported to have swallowed a piece of boudie. On my arrival at the house I found the patient sitting on a woman's knee, with all the symptoms of croup: the mother said the little girl came in and told her she had swallowed something. I at once passed my finger down behind the epiglottis into the larynx, tracing along each side, thinking I would feel any foreign body if impacted in the glottis. I failed in detecting the piece of ware: I then pressed the trachea between my fingers, and was quite satisfied that it did not exist there: under these circumstances I unfortunately concluded that it must be the croup, to which the symptoms bore a striking analogy. An emetic was given immediately, leeches, a blister to the chest, and calomel and antimonials were administered without any benefit.

Mr. Callender (whose patient the little girl was), visited her on his return home from Jarrow; he seemed inclined to perform tracheotomy, from which I strongly dissuaded him, as it was merely on the supposition of a foreign body being in the windpipe that could require this procedure. The dyspnoea grew gradually more urgent, and the child died 16 hours after the accident.

We made a post-mortem examination on the following evening: the lungs were much congested, and the bronchial tubes were filled with mucus, but no false membrane was to be seen. We cut off the trachea and larynx to examine carefully for the ware: it was not visible at the chink of the glottis, but on passing down the blowpipe Mr. Callender found the larynx completely obstructed by a piece of porcelain or china of a triangular shape: it was quite below the level of the vocal chords, which accounts for my not finding it with my

finger. I may remark, that my reason for thinking it was a case of croup received support from the child denying to me that it had swallowed anything, also from the statement of a woman who had the little girl with her at the time of the occurrence, viz., that the child had no ware in her mouth, but a clothes' pin, which she was sucking.

It is remarkable that the voice was not lost with so large a substance between the vocal chords; it is about the size of a shilling, with an arc removed from each side, but it cannot completely have filled up the glottis, as she articulated her words distinctly.

Mr. GIBB exhibited a

Rupture of the Heart,

taken from a sailor boy, who was brought into the Infirmary half an hour and ten minutes after having fallen from the top of a ship's mast. His fall was unbroken, and he alighted on the side of his chest. He was picked up stunned, but after a few minutes recovered his senses. He complained greatly of his chest, and was pale and cold. When admitted, his skin and lips were blanched, his pulse was irregular and almost imperceptible, he was partially insensible, throwing himself about and panting for breath. All the symptoms denoted injury to some internal organ along with hæmorrhage. His ribs and limbs were hurriedly examined on the stretcher, but as no injury to them could be found he was sent to bed, and ordered stimulants and warmth. When denuded of his clothes and placed in bed, he lay quiet for a couple of minutes, and raising himself slightly on his arm, died suddenly.

On post-mortem examination, three gills of partially clotted blood were found in the pericardium, with an irregular laceration of the left auricle into it. The laceration was a quarter of an inch in length, and was situated at the junction of the ear of the auricle with the ventricle. The laceration was sufficiently large to have filled the pericardium with blood in a very few minutes. There was no injury to any other part of his body.

The patient lived an hour after the rupture of the heart, during which period the pericardium must have been completely filled with blood.

Four in-door patients of the Newcastle Infirmary, and the cast of a fifth, presenting a most

Interesting series of cases of Aneurism, were exhibited to the Society for examination. The *first* was a patient of Sir J.

Fife's, with a subclavian aneurism of the left side. The tumour was oval, and projected immediately above the clavicle, occupying the subclavian space, and localized betwixt the sterno-mastoid on one side, and the trapezius muscle on the other. It was about the size of half a small egg, and pulsating strongly could be easily emptied of its blood. Sir J. Fife proposed to tie the subclavian in the first part of its course, but the patient refused to have an operation performed. A murmur was heard on compressing the tumour with the stethoscope, but on very light application of it nothing but the double sounds of the heart were audible.

The *second* was a case of aneurism of the innominate artery, under the care of Mr. Greenhow. The patient, a pitman, æt. 31; had had severe pains in his right arm and side of neck for eighteen months. The pains had been treated by blistering and by internal medicines, under the impression that they were rheumatic. Three weeks before his admission into the Infirmary, a small tumefaction was one day observed at the right sterno-clavicular articulation, which increased very rapidly during the course of a few hours, and extended as a pulsating tumour (projecting considerably) so high up the neck as to impede the opening of the jaw. When admitted, however, the tumour had become much smaller, and has continued to shrink gradually. When shown to the Society the tumour was round, about the size of half an ordinary orange, pulsated strongly, could be partially emptied of its blood when pressed upon, had dislocated the sternal end of the clavicle forwards, and was gradually corroding it and the adjoining surfaces of the ribs and sternum. No murmur could be heard in the tumour, except the double sound of the heart. It would appear to be a false aneurism, the result of the bursting of a true one into the cellular tissue at the root of the neck, with the gradual absorption of the effused blood, and the localization of the fluid contents by a sac which is shrinking.

A cast of the *third* case was shown. It was also an innominate aneurism of great size. The tumour extended on the right side from near the ramus of the jaw down to the third rib, was 11 inches across from side to side, projecting from the neck to a distance of three and four inches. The clavicle and two first ribs were completely corroded and divided into two pieces; each pulsation threw the shoulder outwards as if it was part of the parietes of the tumour. The man was a middle-aged sailor, under the care of Mr. Heath, at the Infirmary, and when first admitted a patient was in

exactly the same condition as the last case. He lived for nearly three years, and the autopsy revealed the innominate artery to be dilated and diseased at its origin from the aorta, as well as where it expanded into the immense aneurismal sac. The sounds of the heart were heard very distinctly in the tumour from the first, and a deep faint souffle, heard most distinctly at the scapula, was also most generally audible.

The *fourth* case, a pitman, æt. 51, under the care of Dr. Bulman in the Infirmary, presented an aneurism of the arch of the aorta. A slight elevation extending from the left edge of the sternum half way over to the shoulder, and from the inferior edge of the clavicle to the lower edge of the third rib, marked its position. The elevation pulsated, was dull on percussion, gave out no murmur in addition to the double sound of the heart, which was particularly clear. A few flying pains about the left shoulder and arm, with a pain in the back of the head, sometimes fixed there for some weeks, were the only symptoms of the aneurism for more than a year. It began to project six weeks ago. The heart is surprisingly quiet, and with the exception of occasional giddiness, and the before mentioned pains, he has no other complaint.

The *fifth* case was one of aneurism of the ascending aorta in a middle-aged pilot, a patient of Dr. Cargill's in the Infirmary. No external tumour marked its presence; the usual symptoms of cardiac disease supervening occasionally, with intervals of comparative freedom from every other symptom, but a feeling of weight and tightness in the chest, were the general symptoms. Marked dulness over the right edge of the middle of the sternum and the adjoining cartilages of the second and third ribs, an impulse there similar to that of the heart, slight fremitus: both sounds of the heart had a double murmur, that with the first sound of the heart being the most distinct, were the principal physical signs. He had been ill for more than a year, and there was evidently some enlargement of the heart, and disease of the aortic valves along with the aneurism.

Dr. HUMBLE and Mr. F. W. N. WILSON presented

Two Aneurismal Sacs,

both taken from cases of sudden death. Both were aneurisms of the descending aorta with large apertures leading from vessels greatly diseased with atheromatous deposit. The sac of each was large, and formed partially of the condensed cellular tissue of the surrounding structures, and in one case by the greatly corroded bodies of the upper dorsal vertebræ. One

patient died the day succeeding the bursting of the aneurism into the muscles of the back, the other by a similar catastrophe into the chest.

Mr. GIBSON, of Birtley, related the following case of

Gangrene of the Lung.

Wm. Mawson, æt. 48, iron-puddler at Birtley Iron Works, sallow complexion and intemperate habits. Had suffered much from hunger, in consequence of these habits and his migratory character.

After recovery from a severe attack of fever, he was seized with severe pain on left side of chest, urgent dyspnoea, and cough; respirations 40 in a minute. There was dulness of percussion at the lower portion of left side of chest, with considerable bulging. The upper portion of the chest of same side was more resonant than usual. On using the stethoscope, there were crepitating rales, with bronchophony at the upper portion of the lung—there was no *ægo-phony*,—and on changing his posture from the sitting posture to the horizontal, the dulness on percussion and bulging disappeared.

He was ordered—Hyd. Chlorid. gr. iij.; Pulv. Opii, gr. ss.; Pulv. Digitalis, gr. j.; Conf. Rosæ, q. s. Fiat Pilula. Mitte duodecim, quorum capiat unum quarta qq. horâ. Admoveatur emplastrum amplum lateri sinistri thoracis.

From this inflammatory attack with effusion, he recovered in the course of eight days, got out and walked about with the aid of a stick for a fortnight, and considering his habits and privations he was ordered a beef-steak and a gill of porter, or ale, daily.

He was, however, after exposing himself on a wet day, again seized with pain in the left side of the chest; pulse quick and feeble, surface covered with cold and clammy perspiration; tongue moist; countenance anxious; a most intolerable expectoration of fetid matter, greenish-white in colour, consisting of hard (*cartilaginous* like) flakes in a thinner fluid, resembling very much in colour the rice-coloured evacuations of cholera.

Notwithstanding the administration of the chlorine mixture of Dr. Watson, which I had determined on using on reading an article by Dr. Probart, (*Vide Art. 17, in 13th Vol. of Ranking's Abstract,*) and wine and porter ad libitum, he sank on the fifth day after this attack.

No physical examination could be made of the chest during this attack, on account of the extreme tenderness of the chest and his great depression. On inspection, however, I discovered that the surface which had been blistered was of an unhealthy dark

colour, and that there were spots over second, fourth, and fifth ribs much darker in colour than the rest of the chest.

Had permission only to open chest. *Post-mortem* eight hours after death :— Body extremely emaciated; on opening the thorax, the left lung was entirely wanting, the second and fourth, fifth and sixth ribs very carious; the cavity of the left side held about a pint of the fluid previously described as expectorated; right lung much congested.

GLOUCESTERSHIRE MEDICAL AND SURGICAL ASSOCIATION.

Proceedings at the Quarterly Meeting held at Cirencester, October 9, 1851.

THE minutes of the proceedings of the last Meeting were read, and also an article in the *Lancet* of August 2, 1851, page 112, in relation to those proceedings.

The SECRETARY stated that he had several letters from members who were unable to attend, which he proposed to read, when those points were brought under discussion to which the letters referred; that one of them being applicable to the present stage of their business, he would proceed at once to read it. He then read part of a letter from Mr. Rumsey of Gloucester, which concluded with recommending a resolution to the meeting. The Secretary said, as Mr. Rumsey was absent, he would himself propose the resolution, as it met his entire approval.

The resolution being read, Mr. WATTS of Frampton, and Mr. GOODLAKE of Painswick, immediately rose to second it. Mr. WARNER of Cirencester suggested some verbal alteration, which was acceded to.

Dr. COLLINGS ROBINSON inquired whether Mr. STOKES, the late President, to whom the resolution applied, was a homœopathist. The Secretary answered in the negative, and stated that in one of his letters, which he held in his hand to read as the business of the day advanced, Mr. Stokes distinctly says, "I am no homœopathist."

The PRESIDENT then put the resolution, which was carried unanimously,—“That our late worthy President, not having fully completed the period of his services at the time when the vote of thanks was passed to him at the last annual meeting, the Association regrets that, in the discharge of the concluding duties of the day, he should have been exposed to unjust and hasty censures, with respect to the resignation of Dr. Adrian Stokes; and they feel assured that

those censures could have originated only from an imperfect knowledge of the facts of the case, and of the objects of the Association; and that this meeting desires to record its entire approval of Mr. Stokes's conduct as President, and its thanks for the interest he uniformly manifested in the welfare of the Society.”

Dr. COLLINGS ROBINSON then addressed the meeting on the resolutions, of which notice had been given by Dr. BROOKES. He expressed his regret that Dr. Brookes should not have been present, and stated that he had undertaken on behalf of Dr. Brookes, whose professional engagements caused his absence, to bring the resolutions before the meeting. He declared his full approbation of the principles of those resolutions, although he liked those framed by the Council of the Medical Society of London better: he would, however, submit to the meeting those of which notice had been given; and after urging the necessity of their adoption, he proposed the first, viz.:—“That the reporters for Medical Journals be eligible for admission to all meetings.”

It was observed by several members, that the eligibility of reporters for admission had never been doubted. Mr. WILTON said, that they had been admitted whenever proposed, and were always considered admissible when the members present desired it.

On this representation, Dr. Collings Robinson abandoned this resolution, and proceeded to propose the next, viz.:—“That there are three classes of practitioners who ought not to be members of this Association:—1st, real homœopathic practitioners; 2nd, those who practise homœopathy in conjunction with other symptoms of treatment; and 3rdly, those who, under various pretences, meet in consultation, or hold professional intercourse with those who practice homœopathy.”

After some pause, the President inquired whether any gentleman would second the resolution just moved. No answer being returned, after some further time the President said, “As Dr. Robinson's resolution is not seconded, it is lost.”

The letters received by the Secretary on the subject of those resolutions were therefore not read; and immediately on the President's decision, Dr. Collings Robinson handed to the Secretary copies of three resolutions, which he said he should bring forward at the next meeting at Cheltenham. The following is a copy of them:—

1st. That the practice of homœopathy, or the prescribing medicines in what is called “infinitesimal doses,” under the pretence that they are useful in the cure of disease, is founded on palpable error, is a

delusion on the part of the practitioner, a deception on the public, and manifestly dangerous to its welfare.

2nd. That the members of this Association cannot honourably hold any professional communion with homœopathists.

3rd. That consequently any member of this Association who shall hereafter practise homœopathy, or who shall knowingly meet in consultation any professed homœopathist, will thereby render himself unworthy of the membership of this Association.

BIOLOGICAL SOCIETY, PARIS.

On the Nerves of the Uterus.

M. BOULARD read a paper on this subject, at a recent meeting of the Biological Society of Paris, when he arrived at the following conclusions:—"The result of our dissections has placed us constantly in opposition to those of Dr. Robert Lee, and on reading for the first time, after having finished our researches, the descriptions of this anatomist, and on looking at the plates which he has published; and afterwards on studying the same memoir by Dr. Snow Beck (*Philos. Trans.*, 1846) we were greatly surprised to find ourselves in complete accordance with the latter author."

M. Boulard also states that the nerves do not enlarge during pregnancy; this conclusion being drawn from the dissections of a uterus taken from the body of a girl, twelve years of age, and of another uterus from the body of a woman who died during parturition. On comparing the two they did not present any appreciable difference in size. He further remarks—"We have never found either ganglia or plexuses on the uterus. Indeed, it is sufficient to cast the eyes over the walls of the gravid uterus, after the removal of the peritoneum, to recognise how easily the muscular fibres, the veins, the lymphatics, &c., could be mistaken as nerves and ganglia, especially when the preparation has been macerated for some time."

HARVEIAN SOCIETY—LIST OF OFFICERS FOR THE ENSUING SESSION.

Presidents—Dr. James Bird, Henry Oubr , Esq.; *Treasurer*—Dr. Joseph Ridge; *Hon. Secretary*—Dr. R. Hutchinson Powell; *Members of Council*—Dr. Chowne, Dr. Richard Quain, H. B. Norman, Esq., *ex officio* members inclusive.

Medical Trials and Inquests.

CORNWALL SUMMER ASSIZES.

BEFORE LORD CAMPBELL.

Trial for Murder by Contused Wounds and Fracture of the Cranium—Evidence of the use of a Weapon from the Appearance of the Wounds—Identity of Human Hair—Mode of distinguishing it, microscopically and physiologically, from the Hair of Goats and other Animals.

A TRIAL for murder, which lately took place at the Cornish Assizes, before Lord Campbell, involves some curious and novel medical features in respect to inferences of the production of wounds by weapons, and the employment of the microscope as a means of distinguishing and identifying human hair.

The prisoner, *Elijah Teague*, was indicted for the murder of William Kendall, by striking him on the head with a hammer. The prisoner was a young man, about 20 years of age; and the deceased, who had married the prisoner's mother (a widow), was about 67 years of age. They had lived, on the whole, for four years, happily together; but about three months before this event, in consequence of the ill health of the mother, and her inability to attend to her son as well as her husband, the prisoner went to live at a neighbouring farmer's, of the name of Grose. On the evening of the 19th of April, between six and seven o'clock in the evening, the deceased rode to a neighbouring town on a pony, which had been shod in the usual way. At a quarter past eight the same evening, he was seen by a witness returning home. He was riding a light bay pony, at a little jog-trot. He was quite sober, appeared perfectly well, and said, in answer to a question, that he was returning from market. At the place at which he was going, he was then about ten minutes or a quarter of an hour from his home. The widow of deceased deposed that she had been married to him four years. About eight o'clock on the evening of the 19th of April she was going to Grose's house, and her son, the prisoner, accompanied her, but turned back, at her request, to drive some sheep out of a field. She saw no more of him until her return to her own house in about an hour. He (the prisoner) was then standing in the passage of the house, and when asked whether deceased had returned, said he had, and that he was in the parlour. Upon going to the door, the prisoner pre-

vented her from entering, saying, "You must not see him, for the old mare has thrown him, and it would frighten you." She then fetched her neighbours, the Groses, but on returning to the house found the door locked, and the prisoner absent. The prisoner did not return until twelve or one o'clock: he said he had been for a doctor. Between four and five o'clock in the morning she was informed that her husband was dead.

The deceased was seen by the Groses about two o'clock in the morning. He was then apparently sitting up or leaning back in an elbow-chair in the parlour. He was dead, and in three quarters of an hour he was stiff. There was a wound in his forehead, but no covering on his head. He had his clothes on. A witness deposed that the prisoner overtook him on his way towards Kendall's house on the night of Saturday, the 19th of April, about half-past twelve o'clock, and told him that the deceased had been kicked in the forehead by a mare.

It was further proved that there was no blood on the deceased's clothes; and that a hammer was found with two white hairs upon it. The hammer was rusty, but there were no marks of blood upon it: the end of the hammer, which was wide and rough, corresponded to the wound in the forehead of the deceased. On the hedge where the hammer was found there were two or three bits of goat-skin. The hat of the deceased was found in the lane near where some spots of blood were seen on the road, and there was no mark of a blow or other injury upon it.

We here give the medical evidence:—

JOHN MOYLE.—I am a surgeon practising at Chacewater, which I have done 15 or 16 years. I recollect Elijah Teague coming to my house on the night of Saturday, the 19th of April, at from five to ten minutes after 12 o'clock. He requested me to visit his father-in-law, the old Mr. Kendall, who he supposed had received a kick from the old mare, whilst in the act of fettering her. He then asked me if I had not seen his mother? I told him "I had been from home the whole of the day; had not seen her myself; nor had I heard of her having called." He said "Then I suppose she is gone to Truro." He again spoke of my visiting Mr. Kendall: I told him I had a previous engagement, but that I would come over and see him as soon as possible. He said, "I hope you will; he appears to be stunned, and has a slight cut in the forehead." He then indicated in my forehead the supposed place of mischief, and drew his finger down the right side of the forehead towards the temple. Supposing it to be a slight case, I told him to go home and apply a cloth, wetted with

cold water, to the wound. I gave him no other instructions: I did not desire him to put Kendall's feet in warm water. If it had been a serious wound I could not have gone at that time, but should have directed him to call on another person. When I told him to apply a wet cloth he said he was afraid to go home; that he had locked the old man in; and he added, to the best of my belief, that he had the key in his pocket, but I am not sure of that expression. He asked me, if Mr. Kendall died, whether the old mare would be knocked in the head or not? I told him that I did not know. He said he kept a school at Mount Horam. He asked me if there had not been an election of Guardians for Truro Union? He then said that he had half-a-score of voting papers brought to him for the purpose of filling them up for persons in the neighbourhood who were unable to write (I presume). He asked me if my father had been elected. I told him not for Kenwyn parish, but for Kea: he was a candidate in both. There was no more conversation about Kendall. Between five and six o'clock I again saw him at my house: he said "Mr. Kendall," or "old Kendall, was dead," adding that he wished me to come over. I immediately came to him at the door. He asked me how I intended going over; if to walk, his brother's trap would bring him back. When I got at the north-west corner of the lane, having passed through the croft, I met the prisoner and John Cocking; the latter drew my attention to sundry spots of blood in the road—in the outer lane. I can show where, in the map, with a pencil. Without stopping at that time to examine the spots, I rode on, and found Mr. Kendall (the deceased) sitting on a bench at the east end of the kitchen. I went into the parlour, where I found the body—the head resting on a chair in the south-west corner of the room, the legs stretched diagonally across the room towards the door. The body was reclining, the legs stretching out, the hands lying near the groin, with some coats over it. Removing the upper coat I recognised Mr. Kendall, and saw a *wound in the centre of the forehead*. It had the appearance externally of being two, but in reality it was only *one wound—inflicted by more blows than one*. *The wound was of nearly a circular figure, with a band of integument passing vertically across it: the band was a little or nothing bruised: on the right side of it there was much contusion, laceration, and breaking through, so as to enable me to insert my finger on the right side of it to the depth of an inch*. On the left side it was very much bruised and jagged, but the integument was *not broken through*. By integument I mean the fleshy

covering of the skull, which was broken through. I gave it as my opinion to Elijah Teague and Cocking, that the wound could not have been given by the kick of a horse, and I think so now: it was inflicted by some heavy instrument. When I came the next day I was shown a hammer, and this wound could have been inflicted by that. A wheelwright named Hocking first drew my attention to it, and Rickard, a painter, secondly; when I first saw the hammer, it was at the top of the garden hedge. I examined it, taking it off the hedge myself, and compared it with the wound, *having previously taken a hair from it*, and had the horses' shoes removed and examined. The wound bore a striking resemblance to the small end of the hammer. The room was rather disorderly. The horses' shoes—the hind ones of the mare, and the fore one of a young colt—at prisoner's brother's request, I examined with the wound. They bore no resemblance whatever. *The hammer produced is the one, and the small end inflicted the injuries in my opinion.* Previous to the inquest I made an examination of the wound. After removing the integument I made a diagram of the wound, and before I removed any of the bone. The diagram produced is the actual size and shape of the wound. I then removed 61 larger pieces of bone, and from 40 to 50 smaller pieces. I then made a second diagram after the bone was removed, and now produce it. There were no fissures radiating from it. I examined that particularly, and there were none whatever. From this I infer that the blows were sharp and forcible. The wound was an inch and a quarter deep from the surface of the skull, after the bone had been removed. The large blood-vessel of the brain was not broken—the longitudinal sinus; and I was astonished at first to see so little blood in the road, and so large a wound. I think the wound was produced by two or more blows, and any one of them would have caused death: I have no doubt that they did cause death. The first blow would have produced immediate unconsciousness and insensibility, and the deceased could not have spoken five minutes after, in my opinion. He might have continued to breathe two hours, or a much shorter time. *When I first took that hammer I found a short, white, stiff hair at its small end.* I have examined that hair with a microscope; *it is white*: I have it here. In my judgment—and I have examined it with a microscope of 250 linear power, and afterwards with a 600 linear power—it is a human hair; I thought so too when I saw it with the naked eye. It has the peculiar characteristics of a human hair, especially with respect to the bulb, and it looks like a cane.

I have compared hair taken from the eyebrow of deceased with this, and they agree. I took the hair myself *from deceased's eyebrow. They agree exactly.* Some of them are of a darker colour, but there are others quite as light. The room was rather disordered, as I have stated. In the middle of the room, near deceased's feet, there was a tub containing water, which was not soiled. There was a broad wet spot on the floor underneath the deceased's feet, and in the neighbourhood of the tub; there was a slight shading of blood on one side of it; there was one small, dark, coagulated spot of blood, towards the back of the room. The shoes of deceased were near, and on the outside of the shoe on the left foot was a small spot of blood; it appeared to have fallen down upon the shoe. On the inside of the right one, near the heel, I found a small quantity of dark, coagulated blood, mixed with sand. The clothes of deceased I examined; they were unspotted with blood, and not disordered, neither were they soiled. I observed in his coat some furze prickles. I afterwards went with Cocking and Teague to the spot where prisoner alleged the accident had taken place. I there saw five isolated spots of dark coagulated blood—about two table-spoonfuls altogether. They were of an oval or circular figure—the *collection* of spots, I mean. The prisoner said nothing. He told me what he had done with deceased. From the size and position of the spots of blood, I am of opinion that they were coagulated and nearly cold before they were put there; because I lifted one of the spots from off the road with my knife, without leaving any stain underneath. I put my knife underneath horizontally. If the blood had flown from a fresh-made wound, the *sand or mould underneath would have absorbed it*, or a portion of it. The road material was stone, with earthy matter; and not very much dust existed where I saw the spots of blood. Between the spot and the house, the road was covered with the same materials, but finer. The prisoner told me he took the old man in his arms, by placing *his* arms underneath the old man's; and that he pulled or dragged him from the place into the house. The deceased was not particularly large—between 7 and 8 stone perhaps. The ground between the spot and the house did not present the appearances of the old man having been dragged along the night before: there was no trace of any body having been dragged along whatever. In the state of the road there must have been those traces. I desired the blood to be covered with gates and furze, which was done. On the Monday morning I went again to the house, and, in the presence of the jury, stripped the body: there

were no marks of violence, except on the head. I applied the horses' shoes to the wound in a variety of ways, and there was no correspondence in the least. The left hind shoe of the mare is four inches by three; the colt's smaller, but the same width across the heel. At the inquest I was in the kitchen, and on the Tuesday I observed spots of blood mixed with water on the wall—the front wall at the east end of the kitchen, between three and four feet high. There were some spots of pure blood on the table—an ordinary kitchen table. They were rather recent spots, and might have been animal blood. I have examined the fetter of the mare; it would not produce such a wound in the forehead, I think.

Cross-examined:—When I went first I did not recognise him till the coat over the face had been removed. There are few vessels in the forehead, except the longitudinal sinus, and they are small; therefore, if the longitudinal sinus were not broken, there would *not be much blood*. It was a wound caused by more than one blow. A stone with two unequal projections, and a hollow between them, might cause such a wound. I would not swear that it did not: such a thing might be possible sometimes, but is hardly probable. Fractured wounds differ from the shape of the instruments they are caused by. An instrument very frequently produces a fracture larger than itself, but, I think, not smaller; and, if larger, it would depend on the force with which the blow was inflicted. [Much of the cross-examination was irrelevant, and was only for the purpose of testing Mr. Moyle's competency, as we thought: we do not give, therefore, all the questions and answers.] Are you acquainted with Beck's Medical Jurisprudence?—I am. Do you agree with Dr. Taylor, whose work on the subject I hold in my hand, that "we may be often in doubt whether, in lacerated or contused wounds, a weapon has been used or not?"—Various things are called weapons, and I do not think Dr. Taylor infallible. Dr. Taylor says "a medical witness is rarely in a position to swear with certainty that a contused wound in the head must be produced by a weapon, and not by a fall." Do you agree with that, and do you think yourself justified in saying that the wound in deceased's head was caused by a blow, and not by a fall?—It is merely a matter of opinion, of course, like Dr. Taylor's. Apply your mind, if you please, to the question, and say whether you coincide in Dr. Taylor's opinion that in a great number of cases it is difficult to pronounce whether a wound is produced by a blow or a fall?—It may be so. Will you tell the jury why, in your opinion, this

wound could not have been produced by a fall?—Because, in my opinion, *it is not probable that the bone would have been driven to so great a depth, and I should have found radiating fractures*: the absence of those fractures indicated to my mind that great force had been employed. And could not great force be produced by a fall—in fact, precisely the same amount?—That would depend entirely on the nature of the body, whether it was small or large; it would depend partly on that, and on the height from which the body fell. After some more questions to the same effect,

Mr. COLLIER, the counsel for prisoner, said—I need scarcely ask you whether, if a man fell from his horse, his riding slowly or rapidly at the time would make a great difference?—Surely.

Mr. COLLIER.—Of course it would. Now did you take up a stone in the road and say "I think that stone might have produced the injury, only there is no blood on it?"—I did not. Will you swear that?—I will. Now I ask you again whether, in the presence of the prisoner, you did not take up a stone near the place and examine it?—I took up several, but I made no such observation: I took them up for *the purpose of seeing whether there were any stains of blood or not*.

By the Judge:—I made no observation as to whether they would correspond with the wound. By Mr. COLLIER:—It is not impossible, but most improbable, that an injury would be caused by a fall from a horse without producing radiating fractures: *the most prominent part of the face would also be injured*. I have never heard of a case occurring in this town, in which a person fell from a horse, and smashed his forehead without damaging his nose. The infliction of such an injury would depend on the direction in which it was inflicted and the height of the stone. *There was no blood on the hammer*. I heard that several persons had examined it before I did, but I took it off the hedge myself. Rickard was one of the two persons who pointed it out to me, and I immediately, on removing it from the hedge, perceived *two hairson it*. The cross-examination was then continued as to the certainty of the hair found being that of a human being's eyebrow, and was, for the most part, unimportant.

ALFRED LORD.—I am the clergyman of the district in which William Kendall's house stood, in the parish of Kenwyn. I was present on Monday at the post-mortem examination, and also at the inquest. I was formerly a medical man, and nine years in practice. I received my education at St. Bartholomew's Hospital. I practised nine years. I was present at the examination

(made by Mr. Moyle) of the wound. I came to the same conclusions as he did. I was present when the hammer was taken off the hedge by Mr. Moyle, and I saw him take a hair from the hammer. I know the spot which the prisoner pointed out as where he found the body, and the road between it and the house. It was rather dusty on the 21st, and the weather was rainy on the Sunday. I observed no tracks of a body having been dragged along the road. In my judgment, if the body had been dragged along on the Saturday, those tracks would not have been effaced on the Sunday. Rain would have affected them.

Cross-examined:—It is seven years since I practised, but I have administered assistance to my parishioners extensively in Scilly and other places. It is my opinion that the wound would not have been produced by a fall. I will not swear that it could not have been so produced; but I should say it is next to an impossibility. I should reply, as to a kick with the shoe of a horse, in the same manner: I think it was impossible for it to have been thus produced, but I will not swear it was not. With regard to the shoes, the wound, if it had been inflicted by one of them, would have extended over a larger surface, and been driven deeper into the skull. It would also have broken the transverse section or portion of the bone which existed between the two wounds. A stone, with one blow, and having two projections, would hardly have produced such a wound, because of the section spoken of before. If with two projections, it must have been driven with wonderful accuracy. The wound was very deep, and the portion of the skull was driven in deeply. It is my opinion that the wound could not have been produced by one blow or one fall. A fall would not have come with sufficient force to have comminuted the bone and penetrated with such force. I give this as a decided opinion. I have no criterion to estimate the difference between a fall and a blow, but any one of common sense could distinguish them. There is a concentration of power in the case of a blow which a fall could scarcely, in my opinion, cause.

RICHARD COUCH.—I am a Member of the College of Surgeons, and live at Penzance. I have been for 10 or 12 years past employed in using the microscope, and have experimented many times on human hair. The human hair differs from that of other animals in a manner easily appreciable by a person who has been accustomed to examine it; and I have been accustomed. I had a hair given me by Mr. Moyle, of Chacewater, in the latter part of July. I examined it microscopically under a variety of powers, so as to satisfy

myself. I had no doubt from the first, but examined it under a variety of powers to be perfectly satisfied. I have examined it again, and found it had been *bruised or partly divided, as if squeezed between two blunt substances*: this made me think there was something strange, but still from the first I made up my mind that it was the hair from a human being's *eye-brow*.

Cross-examined:—The hair of every animal I have examined differs from that of a human being materially, and that difference enables me to give a decided opinion that this was a human hair. The hair of the head differs from that of the eye-brow: this was one of the latter. It was white and secondary hair which grows with age: I speak of that which comes from the *eye-brow of an old subject*. I know there is a good deal of difference of opinion prevailing among scientific men as to the formation of human hair: some say it is composed of two parts—some of one only. A difference exists in the hair of a living and dead person; that of the latter would probably be shrivelled, and would require immersion in oil or water to restore it: there is also a distinction between the hair of young and old persons—the internal and soft substance of the hair of the latter would become hardened and horny; but I think there is little difference between the hair of persons of the same age. I am acquainted with Dr. Porter's work, of Bristol, on the subject. There may be a difference in the medullary portion of the hair in persons not of the same age, but not in persons of the same age. I should like to know in what year the work you are quoting from was published, because the researches on the subject to which I refer have been brought down to 1848; and since that period, during the last two years, minute microscopical observations have been made. I am aware that a controversy is still pending as to whether the hair of a negro is hair or wool. I have myself examined the hair of a negro: it is surrounded with scales, which are just as apparent in the hair of a person who is not in the habit of using a comb as in the negro's. There was a controversy among scientific men on this subject, but I believe there is none now: the prevailing opinion is that it is hair. *The hair of the eye-brow is generally conoidal or pyramidal—broader at its base than at its apex, and is very elastic; the hair of the whiskers, after it has escaped from the skin, contracts, and it is nearly equal in diameter throughout: there may be a slight difference just above the surface of the skin, but not afterwards.* The hair of the whisker does not come to a point. I have not microscopically examined the difference between trimmed and cut whiskers, and those of natural growth.

By the Judge :—All hair differs—the hair of one animal from that of another. By a microscope of 600 linear power, hair can certainly be pronounced to be human or not: I could not by an instrument of lower power determine the point satisfactorily; but by this, human hair can most certainly be discriminated from that of any animal; and the hair of the eye-brow would present a perceptible difference from that of the beard or whisker.

The prisoner made a statement, at the inquest, of his proceedings on the night on which the deceased died, and this was, in many respects, inconsistent with the facts proved in the case, and showed, to say the least, very extraordinary conduct on the part of one who had not really been guilty of causing the death of the deceased.

The defence rested upon the allegation that it was not distinctly proved that the wounds in the forehead which caused death had been produced by a blow or blows with a hammer. The counsel for the prisoner left the jury to infer that the wounds might have been caused by an accidental fall on a pointed stone, or by a kick from a horse. The hammer was not concealed. There was no blood about it: if it had been washed, the hairs would have been washed away, and none found on it. There was rust on the hammer, but no evidence of any rust being found in the skin of the wound. As to the hairs on the hammer, it was contended that they might have been derived from the bits of goat-skin exposed on the hedge,—or they might have been the hairs of some other person, and not of the deceased.

The jury, after deliberating for half an hour, returned a verdict of *Not Guilty*.

. Setting aside the moral circumstances of this remarkable case, the only one requiring medical examination is the origin of the wound on the forehead. The answer to this, however, necessarily included the question whether the prisoner was or was not guilty of this act of homicide, because, if the wound was really produced by a weapon, no other hand but the prisoner's could have inflicted it. The prisoner himself suggested that the wound had been caused by the kick of a mare, although, if innocent, there was no necessity for his making any suggestion on the subject. The description of the wound renders it impossible to suppose that it was caused by the kick of a horse, and its insulated and duplex character, together with its depth, the comminuted state of the bone in two different spots in the centre of the forehead, and the absence of any marks of injury to the face, are facts which render

it extremely difficult to assign these wounds to an accidental fall on a stone.

One of the medical witnesses, Mr. Moyle, who appears to have given his evidence with great care, considered that the wound was produced with the small end of the hammer found in the hedge. His reasons for this opinion were, that the weapon fitted the wound,—that it would have accounted for its great depth, its confined nature, and the comminuted state of the bone. It is admitted that there was no blood on the hammer, although on the right side of the wound there was much contusion and laceration, and such a breaking through as to enable him to insert his finger to the depth of more than an inch. The most extraordinary circumstance was, however, the presence of two short stiff white hairs adhering to the small end of the hammer, one of which presented a bruised or squeezed appearance under the microscope. These hairs were compared with some taken from deceased's eye-brow, and considered to be identical with them: the witnesses entertained no doubt that they were human hairs.

Although it does not appear in evidence, we have been informed that *both eye-brows* were involved in the contused wound on the forehead. It is, however, singular that not the slightest trace of blood was found on the weapon.

As circumstances favourable to the prisoner, and which probably led to his acquittal, it may be remarked that there was an entire absence of motive for such an act on his part,—that there was no lying in wait for the deceased; on the contrary, the prisoner, by a mere accident, appears to have returned to the house at his mother's request, after having accompanied her a short distance. On the whole, notwithstanding the suspicious conduct of the prisoner, the facts did not so clearly fix the act of murder upon him as to induce the jury to find a verdict of guilty. In Scotland the verdict would probably have been, *Not proven*.

PRELIMINARY EXAMINATION IN CLASSICS AND MATHEMATICS AT APOTHECARIES' HALL.

WE shall, in our next number, publish the papers submitted to the candidates on the first day's examination. The oral examination was held on the Monday and Tuesday of the present week. It was optional with the candidates to take the Gospel of St. Luke in Greek, or the Anabasis of Xenophon; but about forty candidates preferred the latter. Ninety-three gentlemen presented themselves at this examination.

Correspondence.

SIX PAPERS ON THE CLASS OF MEDICAL LITERATURE MOST NEEDED IN THE PRESENT DAY. ADDRESSED TO MEDICAL STUDENTS. BY HORACE DOBELL, MEMBER OF THE ROYAL COLLEGE OF SURGEONS.

No. III.

The state of the medical world in the present age—additional evidence of the necessities of medical science—popular toleration of quackery and inconsistency of medical men explained—the means by which we gain acquaintance with processes and causes—the means by which the deficient knowledge in medical science may be supplied—apparent objections—answer to these based upon history.

WE have watched the dawn of reason upon the science of medicine, and seen the clouds of superstition with which its sky was overcast gradually driven back to the horizon, and finally dissipated, when the sun of enlightenment rose higher in the heavens; we have watched the morning of our science, in its dim grey light, open slowly into day; many storms have broken the sunlight, many shadows fallen and threatened to obliterate it for ever, but these have passed away, and the early day has become bright and beautiful, the light of reason and enlightenment have brought to view the new buds just rising from the roots of knowledge, and declaring that the spring-time of our science has arrived. This is the state in which we find the world of medical science in our own day, and the great question is now before us. We are looking into life—the great duty of that life as regards our professions lies freely opened to our view—the task which an honourable and praiseworthy ambition has set before us.

As yet I have trusted to reason alone to point out the nature of the knowledge needed by our profession, and it is meet that we should pause here, to consider if my conclusion is confirmed by other evidence, by that evidence which testifies to the necessities of each age, as it passes in the circle of time; viz., the current cry in the world, and the objects of our daily observation; and, in the present case, we shall find that these confirm the conclusion to which reason has conducted us. Why have we seen so long the reign of quackery tolerated and upheld? Why have we heard so much of all the "pathies" with which society has been noisy; of "hydropathy," of its numerous disciples and its benefits, boasted so highly for a

period and then forgotten? Why have we seen so many converts to "mesmerism," as a cure for diseases? Why have we heard of certain remedies, professed to cure whole hosts of maladies of contrary natures? Why do we hear of "homoeopathy," and see its disciples increase so rapidly as they have done of late? Why do we see men who have studied their profession declare that the practice of medicine is a farce, and our power over disease a mere fantasy? Why do we see enlightened men treat similar cases on opposite principles? except that the causes and processes of disease, and the means of arresting or removing them, are so little understood, it is proof sufficient that we are wanting in a knowledge of the causes and treatment of disease, and it behoves us deeply to consider how this knowledge may be supplied. I proceed, but with great diffidence, to answer this difficult and abstruse question.

The knowledge we so much need has been seen to consist in an acquaintance with the processes concerned in the production of changes found in disease, and an acquaintance with the causes to which these processes are due; also, we require to know the means by which these may be arrested or removed. It is of the two former points that I speak first, the latter being deferred to a future page.

Let us look into our own minds, to consider the nature of this required information. In the first place it consists of processes, that is to say of actions; and in most instances a process will consist of many simultaneous actions. Now, with but little trouble, we may recollect many processes with which we are acquainted, and thus in our minds, as I before said, we may consider the nature of this acquaintance; and it will be found that our acquaintance with processes is not like that we have with objects of sense—we shall find that we have seen, heard, or felt—we have in some way been made aware by sensation of the facts connected with the process; we have seen the matters concerned in the change, we have perceived those existing before and after the process, but the process itself has been too subtle, or too complicated, or too minute, or too rapid, or too something, with the notion of which we excuse ourselves for not observing it; while the truth is, that it could not be observed because it was not an object of sense, and by continuing in the same contemplation of these familiar matters we shall at length find that, in truth, the notion we gain of a process, the acquaintance we obtain with it, is through an act of induction, from the facts concerned in the

change, not by observation, which is sensation. I may illustrate this, for the sake of greater clearness, by some simple examples. We throw two bodies, one a stone, the other a piece of cork, into a vessel containing water—the one sinks to the bottom, the other floats on the surface—and the level of the water rises in the vessel. Here we may observe the state of the vessel and of its contents before the operation, the descent of the one body and the ascent of the other, and the rising of the water in the vessel. These are the objects of sense, the facts concerned in the process which we can observe; but the process by which the change is effected cannot be ascertained by other means than an act of reason, by a review of the exact facts, and by an induction from them. To take another example: if a solution of iodide of potassium be dropped on some crystals of bichloride of mercury, their colour is changed from an opaque white to a bright scarlet; all that observation can teach in this matter are the facts:—first, the presence of white crystals of bichloride of mercury; secondly, the addition of iodide of potassium dissolved in water; thirdly, the change in the colour of the crystals from white to scarlet; fourthly, the result of the change, viz., the formation of chloride of potassium. But the process by which the change was effected could not be observed, and must be detected by induction. Again, if we take a bladder filled with cold air, and expose it to heat, it bursts; all that observation can teach us in this case is the existence of the bladder, that it is filled with cold air, that heat is applied, and that after a short time the bladder bursts and its contents escape, that the air is elevated in temperature and occupies a larger space than it did before the operation. Careful observation can teach us all this, for these are facts, but an acquaintance with the process by which the change takes place can only be obtained by assembling these facts, and reasoning upon them.

It would be tedious to multiply examples of a principle so self-evident. I shall therefore assume it to be admitted that an acquaintance with the nature of processes cannot be gained by observation, and may be gained by reason. And we will now pass on to the subject of causes; the means by which we gain an acquaintance with the causes of processes. It is evident, that, as all change is the result of some process, the cause of the process, and the cause of the change it effects, will be the same; therefore, for the sake of brevity, I shall speak of causes as causes of change, not of processes. The cause must precede its effect; therefore, in the case of change, we

may see the thing before the change takes place, and we may see it in its changed condition; but we cannot see the cause of change and the change at the same time: it follows, therefore, that we must resort to some other source than observation to learn the cause of any change presented to us. And let us again look into our own minds, and observe to what source we have ordinarily resorted in discovering causes with which we are acquainted, and it will be found that, as in the case of processes and their nature, it is to reason, and not to observation, that we look for the discovery of cause. Thus, to take a familiar example, the way in which we discover the cause of a shadow. Now this matter is so simple and so familiar that at first thought it will appear that we learn the cause of shadow through our senses alone, by observation; but more careful thought will show us that it is not so: *e. g.* From a level surface of the earth we observe a body rising perpendicularly, as a tree for instance, and if the light come from either side, the opposite will be in shade, and a shadow of the perpendicular body will be seen upon the earth on that side, while the other side and all around is light. Observation will, in this case, teach us just so much as this,—first, that there is a level surface of the earth; secondly, that there is a tree rising from one part of it; thirdly, that there is light, and that the light comes from one particular point; fourthly, that the side of the tree turned towards the point from which the light comes is enlightened; fifthly, that the opposite side is not enlightened; sixthly, that the portion of earth between which and the light stands the tree is also dark; seventhly, that all surrounding parts of the earth are light. Having these facts presented in connection by observation, the induction leading to the discovery of the cause is almost forced upon the mind, and we at once conclude that if the tree were not there, there would not be the shadow, and, therefore, that the tree is the cause of the shadow. But observation without reason could not possibly teach this. Observation can only tell that while the tree stands there, there is a shadow, and that where that shadow is not, there is light; but it cannot take the next step, short as it seems, and say that light would be where darkness is if the tree were removed; because, as we before stated, while the effect is an object of sense, the cause as such cannot be; and while the cause is an object of sense, the effect as such cannot be: the only means of appreciating the two in connection is through reason. To take a second example—the cause of sound. If we strike a drum with a drum-stick, obser-

vation may acquaint us with the fact that the stick struck the drum, also with the fact that we heard a sound almost immediately; and in this case the cause and effect follow so rapidly, that they seem to be connected by observation. But the link between the stroke and the sound—that is to say, all which constitutes them cause and effect—is supplied by reason, and cannot proceed from any other source. I might continue to present examples in confirmation of this principle to the end of time; but as they are as familiar as they are numerous, I need not lose time by their recital. I shall therefore consider it granted that the cause of any process by which a change is worked *cannot be learned by observation, but may be learned by reason.*

It has now been shewn and illustrated, that while the existing conditions of parts or things can be learned by observation, the processes by which such conditions are brought about, and the causes of these processes, can only be learned by reason. It is evident that this principle applies equally to the most complicated cases, and to the simple examples which have been employed for convenience in demonstration. Therefore we have theoretically answered the first part of the question proposed; for we have come to the conclusion, that a “knowledge of the causes and processes of disease may be supplied by inductive reasoning.” I am well aware that even upon a careful view of the subject there appear to be many grounds open for objection; and it is only natural that those who see these grounds,—who do not agree with my conclusion,—should refer to the experience of past ages as a testimony to the fruitlessness of philosophy applied to medical science: it is my duty, therefore, to offer some answer to these objections; and in doing so I hope to bring evidence which will testify to the correctness of my conclusion, because I have formed it upon the basis of the very past experience to which I am referred.

It will be remembered that in the sketch of the history of medical science which I have given, I referred to one epoch under the name of “the philosophical period,”—a space of time extending from the dispersion of the Pythagorean Society 500 years B.C. to the foundation of the Alexandrian Library 320 years B.C. This short period of 180 years was distinguished by the names of Hippocrates, Socrates, Plato, Aristotle, Anaxagoras, Empedocles, Democritus; all of whom, except Socrates, devoted their attention to the study of medicine in the pursuance of their philosophy; and if *they* were unsuccessful in the application of philosophy to medicine, it may appear presumptuous to suppose that its application

is likely to be successful in the present day: but let us pause before making such a conclusion, to consider if it would be just. I have referred to men of high genius—to great philosophers whose names have come down to us laden with the accumulated honour of more than twenty centuries—honour richly merited by men who were the first to think boldly, to labour sedulously for the advancement of the sciences, and to make public the results of their meditations. But because men of noble genius and industry applied their powers to an attempted advancement of science, it does not follow that the attempt was rightly made; and when we contemplate the circumstances under which it was made—the state of knowledge at that time—the opportunities offered to men of improving the understanding and directing the current of the thoughts,—we shall feel that it would have been perfectly miraculous had these philosophers proceeded successfully in their application of reason, and we shall be prepared to learn that those who have studied the subject most deeply have come to the conclusion that the labours of the philosophers whose names I have quoted were all but fruitless in their application to the sciences. Thus Prof. Whewell says,—“The methods and forms of philosophising which we have described as employed in the Greek schools failed altogether in their application to physics. No discovery of general laws—no explanation of general phenomena, rewarded the acuteness and boldness of these early students of nature. Astronomy, which made considerable progress during the existence of the sects of Greek philosophers, gained, perhaps, something by the authority with which Plato taught the supremacy and universality of mathematical rule and order; and the truths of harmonics, which had probably given rise to the Pythagorean passion for numbers, were cultivated with much care by that school. But after these first impulses the sciences owed nothing to the philosophical sects, and the vast and complex accumulations and apparatus of the Stagirite do not appear to have led to any theoretical truths.” “This assertion hardly requires proof, since, in the existing body of science, there are no doctrines for which we are indebted to the Aristotelian school. Real truths, when once established, remain to the end of time a part of the mental treasure of man, and may be discerned through all the additions of later days. But we can point out no physical doctrine now received of which we trace the anticipation in Aristotle in the way in which we see the Copernican system anticipated by Aristarchus, the resolution of the heavenly appearances into circular motions suggested by Plato, and the numerical

relations of musical intervals ascribed to Pythagoras."*

"Thus the Aristotelian physics cannot be considered as otherwise than a complete failure. It collected no general laws from facts; and consequently, when it tried to explain facts, it had no principles which were of any avail. The same may be said of the other schools of philosophy; they arrived at no doctrines from which they could adduce, by sound reasoning, such facts as they saw."† And this failure of the Greek philosophy was as complete in its application to medical science as to the more exact sciences to which Prof. Whewell particularly refers. But, although physical science received so little advancement from the labours of these renowned philosophers of the Greek schools, in succeeding ages vast improvements have been made in these very sciences through inductive philosophy. *Why, then, I would ask, may not medical science receive some part of its much-needed improvement from the same source?* If the failure of the Greek philosophy in other departments of science was no argument *against* the success of the philosophy of later years, the failure of the Greek philosophy in medical science is no argument *against* the success of philosophy in the present day.

[To be continued.]

Medical Intelligence.

THE FEVER AT OPORTO.

LETTERS of the date of Oct. 6 contain the following announcement:—The Board of Health continue every third or fourth day to report one case of yellow fever, at which no alarm appears to prevail throughout the city. Nor can it be said that any alarm has at all prevailed from the first among the inhabitants. Perhaps in former years as great a prevalence of fever has actually existed here in the months of August and September; and, considering the intense heat and the continued drought during the months of July, August, and September, it is not to be wondered at that fever to some extent should have existed. But it is to be questioned whether the cases of fever in general have been more than in corresponding seasons of other years, when the season has been actually of a milder nature: certainly it is beyond all question or doubt that the majority of cases re-

ported as "yellow fever" have had all the symptoms and tendencies thereof, with the exception that they have been of a very modified nature, have not been considered contagious, and have not been at all fatal where the disease was attended to in time, and the proper remedies administered. The number of deaths which have ensued do not amount to more than 30 or 40 at most, and that in a city of 120,000 inhabitants. The cases of fever throughout have in general been confined to one district, near to the shipping.

PORTRAIT OF DR. THOMAS YOUNG.

At a meeting of the Medical Officers, the Rev. the Chaplain, and other Governors of St. George's Hospital, held in the Board Room of the Hospital, on Thursday, Oct. 9th, 1851; Dr. Wilson in the Chair—

It was proposed by Dr. Nairne, seconded by Thomas Tatum, Esq., and resolved—1. That a period of twenty-three years having now elapsed since the death of Dr. Thomas Young, one of the physicians to St. George's Hospital, it is the earnest wish of this meeting that a suitable memorial should be placed within the walls of the Hospital, in testimony of the grateful respect and admiration with which the vast attainments and high professional character of this illustrious physician will ever be regarded by the friends and governors of the Institution.

It was proposed by Dr. Page, seconded by Prescott Hewett, Esq., and resolved—2. That, in pursuance of the foregoing resolution, Mr. Thomas Brigstocke be commissioned, with the kind consent and approval of Hudson Gurney, Esq., to make a full-sized copy of the original portrait of Dr. Thomas Young, now at Keswick Hall, Norwich; and that such painting, when completed, be presented to the Governors of St. George's Hospital, with a request that it may find its fitting place on the walls of the Board Room.

It was proposed by the Rev. the Chaplain, seconded by Dr. Bence Jones, and resolved—3. That a Committee, consisting of Dr. Wilson, R. Keate, Esq., the Rev. the Chaplain, and Dr. Pitman, be formed for carrying the foregoing resolution into effect.

It was proposed by Charles Hawkins, Esq., seconded by Prescott Hewett, Esq., and resolved—4. That Dr. Pitman be requested to act as Secretary and Treasurer of the Committee, and that he be empowered to receive subscriptions, not exceeding £1. 1s., under each separate name, from the Governors and other friends of St. George's Hospital who may be desirous of taking part in the proposed tribute to the memory of Dr. Young.

* History of the Inductive Sciences, by the Rev. W. Whewell, M.A., vol. i. p. 68. Parker, 1837.

† Ibid.

QUEEN'S COLLEGE, BIRMINGHAM—
FELLOWSHIPS.

THE Queen's College at Birmingham has recently obtained powers under a Supplemental charter to elect such members of the College as may distinguish themselves during their studies, and who subsequently obtain a diploma in medicine and surgery, or become graduates in medicine, law, or arts, Fellows of the College. The authorities of the College intend to confer this honour in the first instance upon such of the earlier members of the institution (the Royal School of Medicine) as the Principal and Council may determine to be eligible, and in accordance with the provisions of the charter. Dr. Barker, of Bedford, and Dr. Roden, of Kidderminster, have been elected Fellows. These, with Mr. G. B. Massen, a Warneford medallist, and Resident Medical Officer of the Stafford Infirmary, are the first three members of the profession selected for this distinction under the new charter.

Amongst other privileges, the Fellows are entitled to vote at all meetings of the Governors, to free admission to the medical and general libraries, to the museum, dissecting room, to the lectures of the professors, and to dine in the College Hall.

MEDICAL BENEVOLENT COLLEGE.

AT a meeting of the medical practitioners of Leamington and Warwick, held at Leamington, October 9th, 1851, Dr. JEAFFRESON in the Chair, the following resolutions were passed:—

First,—Proposed by Mr. Prichard, and seconded by Mr. Boulton, "That the Establishment of an Asylum for Distressed Medical Men or their Widows, and a School for the Education of their Sons, is an object worthy of the cordial co-operation of the profession, and has strong claims on the sympathy of the public."

Second,—Proposed by Dr. Homer, and seconded by Mr. Hiron, "That the members of the medical profession in Leamington and Warwick forming this meeting, pledge themselves by all available means to assist in the accomplishment of so desirable an object, and earnestly exhort their professional brethren and their friends throughout the country to aid them in carrying it out."

Third,—Proposed by Dr. Franklin, and seconded by Mr. Blenkinsop, "That a Local Committee be formed, consisting of the following gentlemen, for the purpose of co-operating with the Central Committee in London, and of receiving Subscriptions and Donations from the Profession:—Dr. Jeaffreson, Mr. Middleton, Mr. Boulton, Dr. Homer, Dr. Franklin, Mr. Jones, Mr.

Blenkinsop, Mr. Babington, Mr. Hiron, Mr. Watson, and Mr. Prichard."

Fourth,—Proposed by Mr. Blenkinsop, and seconded by Mr. Busby, "That Dr. Jeaffreson be requested to accept the office of Chairman, and Mr. Prichard that of Honorary Secretary and Treasurer to the Local Committee."

Subscriptions and donations will be thankfully received by the Local Treasurer, or by any member of the Committee.

| | | |
|----------------------------------|----|---|
| Dr. Jeaffreson, annual | £1 | 1 |
| Ditto, donation | 1 | 1 |
| Mr. Middleton, annual | 1 | 1 |
| Mr. Jones, ditto | 1 | 1 |
| Mr. Babington, ditto | 1 | 1 |
| Ditto, donation | 2 | 0 |
| Mr. Blenkinsop, annual | 1 | 1 |
| Mr. Boulton, ditto | 1 | 1 |
| Dr. Homer, ditto | 1 | 1 |
| Dr. Franklin, annual | 1 | 1 |
| Dr. Niddrie, ditto | 1 | 1 |
| Mr. Busby, ditto | 1 | 1 |
| Mr. Hitchman, ditto | 1 | 1 |
| Mr. Hiron, ditto | 1 | 1 |
| Mr. Birt, ditto | 1 | 1 |
| Mr. Prichard, ditto | 1 | 1 |
| Ditto, donation | 2 | 0 |

EXCERPT FROM MINUTE OF MEETING OF
THE FACULTY OF PHYSICIANS AND SUR-
GEONS OF GLASGOW, HELD 1ST SEPT.,
1851.

"THE Faculty having had their attention called to certain resolutions by the Royal Colleges of Edinburgh, in reference to homœopathy, and heard the opinion of their Council to whom the matter was referred at last meeting, do now in conformity with that opinion, express their concurrence and approbation of the views taken by the Royal Colleges, as specially detailed in the resolutions of the Royal College of Physicians; but as none of the Fellows or Licentiates of Faculty, so far as known to them, have hitherto professed or countenanced this system, they consider any further notice of the subject on their part in the meantime unnecessary."

UNIVERSITY OF OXFORD MEDICAL
INSTRUCTION.

THE new Clinical Professor of Medicine (Dr. Ogle), proposes to commence his next course of instruction at the Radcliffe Infirmary, at 1 o'clock on Saturday, Nov. 1. Those students of medicine (non-academics) who desire to attend these lectures will be required to exhibit the written consent of the parties to whom their services, as pupils, are legally due. All further information may be obtained by inquiry of the Secretary of the Infirmary, any morning, between the hours of 11 and 1.

FINANCIAL REPORT OF THE ROYAL COLLEGE OF SURGEONS.

FROM a report just published of the receipts and expenditure of the Royal College of Surgeons from Midsummer day 1850, to Midsummer day 1851, it appears that the former amounted to £9623. 8s. 10d. from the following sources of income—viz. Court of examiners, £8220. 17s. ; fees on admission to the fellowship, £126 ; certificate of having received the diploma, £5. 5s. ; fees on admission to Council and Court of examiners, £63 ; sale of lists of members, catalogues, &c., £186. 15s. ; dividends on investments in government securities, £1021. 11s. 10d. ; making a total of £9623. 8s. 10d. The disbursements amounted to £9215. 18s. 10d., and may be divided under the following heads—viz. (College department), fees to council, courts of examiners, auditors, diploma stamps, lists of members, law expenses, salaries, wages, coals, &c., £5720. 15s. 7d. Museum department : catalogues, specimens, spirit, bottles, student-ships, salaries, wages, &c., £2277. 16s. 11d. Library department, including purchase and binding of books, salary, &c., £459. 19s. 1d. Miscellaneous, including taxes, insurance, furniture, &c., £562. 18s. 7d. ; repairs and painting, £22. 8s. 4d. ; under deeds of trust, including oration, lectures, prizes, &c. £172. 0s. 4d. Total, £9215. 18s. 10d. From the report in question, it appears that the incidental income amounts to £8601. 17s., and the permanent income to £1029. 11s. 10d. ; the incidental expenditure to £5146. 9s., and the permanent expenditure to £4069. 9s. 10d.

MEDICAL APPOINTMENT—LONDON HOSPITAL.

DR. PEREIRA has been appointed Physician to the London Hospital, in place of Dr. Frampton, who has resigned. There is consequently a vacancy in the office of Assistant-surgeon.

OBITUARY.

ON the 15th inst., aged 61, Daniel Macnamara, Esq., surgeon, of Uxbridge, Middlesex.

On the 7th inst., aged 28, Robert R. Crucefix, Surgeon, Shepton Mallett.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Oct. 18.

| BIRTHS. | DEATHS. |
|---------------|---------------|
| Males.... 773 | Males.... 499 |
| Females.. 670 | Females.. 482 |
| <u>1443</u> | <u>981</u> |

CAUSES OF DEATH.

| | |
|--|-----|
| ALL CAUSES | 981 |
| SPECIFIED CAUSES | 975 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 229 |
| <i>Sporadic Diseases, viz.—</i> | |
| 1. Dropsy, Cancer, &c. | 39 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 97 |
| 4. Heart and Bloodvessels..... | 86 |
| 5. Lungs and organs of Respiration | 129 |
| 6. Stomach, Liver, &c. | 68 |
| 7. Diseases of the Kidneys, &c. | 14 |
| 8. Childbirth, Diseases of Uterus, &c. | 9 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 8 |
| 10. Skin..... | 2 |
| 11. Premature Birth | 0 |
| 12. Old Age | 44 |
| 13. Sudden Deaths..... | 11 |
| 14. Violence, Privation, Cold, &c.... | 25 |

The following is a selection of the numbers of Deaths from the most important special causes :

| | | | |
|--------------------|----|------------------|-----|
| Small-pox..... | 16 | Convulsions..... | 22 |
| Measles..... | 15 | Bronchitis | 53 |
| Scarlatina | 43 | Pneumonia | 55 |
| Hooping-cough.... | 14 | Phthisis | 138 |
| Diarrhoea..... | 42 | Lungs | 5 |
| Cholera..... | 1 | Teething | 4 |
| Typhus..... | 67 | Stomach | 8 |
| Dropsy | 10 | Liver..... | 15 |
| Hydrocephalus | 34 | Childbirth | 6 |
| Apoplexy | 26 | Uterus | 2 |
| Paralysis | 14 | | |

REMARKS.—The total number of deaths was 130 *above* the average mortality of the 42d week of ten previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 29.72
 Thermometer^a 52.8
 Self-registering do.^b Max. 0.0 Min. 31.

^a From 12 observations daily. ^b Sun.

RAIN, in inches, .48. — Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 49 *above* the mean of the month.

NOTICES TO CORRESPONDENTS.

We are obliged to Dr. F. J. Brown for his Two Cases of death from Scarlatina. They shall have early insertion.

Students.—Inquiry should be made at the Publishers.

Mr. J. B. Harrison.—The letter will be inserted. Dr. Hull.—We will take an early opportunity of publishing the remarks on Mesmerism.

The paper containing a Report on the Scarborough Sea-bathing Infirmary has reached us. The Examination Questions of the University of St. Andrews, as well as those of the Preliminary Examination of the Apothecaries' Society, will be published next week.

Communications from Mr. Wilton, Dr. Watson, and Mr. J. Pretty, have been received.

It is requested that Proofs, when corrected, be returned addressed to the printers, Messrs. WILSON AND OGILVY, 57, Skinner Street, Snowhill, London.

Lectures.

INTRODUCTORY LECTURE,

DELIVERED AT THE LONDON HOSPITAL,
ON THE OPENING OF THE MEDICAL
SESSION,

ON OCTOBER 1ST, 1851.

BY DR. FRASER,
Assistant-Physician to the Hospital.

GENTLEMEN,—The Lecturers at the London Hospital Medical School have confided to me the pleasing duty of welcoming you this day at the opening of the session of 1851-52, being their 66th anniversary.

To the senior students the day will recal past successes fairly won, and honours brilliantly achieved. To the junior students the day will be one "big with fate." To all, the day may be a means of refreshing old, and creating new friendships; but, at least, let this meeting be an earnest of the kind feeling and unanimity which should ever characterise the intercourse between teacher and pupil.

At the risk of being charged with partiality—of which, upon the present occasion, I admit that I am not entirely free—I must congratulate you on having selected this school as the place of your future studies, so satisfied am I that the teaching of men who draw their information from the exhaustless mine contained in the wards of this large and well-managed hospital cannot fail to be most valuable, and admirably qualified to make you learned and successful practitioners.

I would warn the junior student that there is no "royal road" to eminence in the medical profession, and that he is not to expect to attain fame as a student, or success as a practitioner, by a mere routine of attendance on lectures and partial study, but that he must "ever have his cup at the well," to keep pace with the progress of the day; otherwise he may be soon outstripped by more aspiring competitors.

In attaining and in sustaining your position, you will require inexhaustible patience, untiring zeal, a sound judgment, quickness of decision, firmness of mind, coolness of temper, a profound knowledge of the human heart, and, lastly, a devoted readiness to sacrifice personal comfort at the shrine of public duty—in short, a total abnegation of self.

You must have also a clear perception of the important moral duties which necessarily devolve upon each individual

member of the profession; for, unless you are prepared to be faithful to your purpose, and to have no misgivings as to the truthfulness of your high calling, you will fail in creating happiness to yourselves, and can scarcely hope to add to the welfare of others.

A sceptic will be wanting in precision of purpose: he may view with admiration the glorious fabric of medicine, raised by the patient industry of his forefathers, but, like a cathedral to the atheist, no holy emotions will be inspired. Therefore, unless you believe with the amiable Cabanis, that, "To study and practise medicine properly, it is necessary to view it as a matter of high importance, and, before we can do so, we must have full belief"—you ought to pause, even on the threshold.

I shall not enter into the *questio vexata* of what is the best preliminary education for aspirants to the medical profession, but I rejoice with those who have had the advantage of a classical tuition; for, apart from the practical use of which a knowledge of the dead languages may undoubtedly be, the perusal of the ancient authors in the original tongue is an inward, constant, and lasting enjoyment.

Whatever difference of opinion there may be as to the need of a knowledge of the dead languages, there can be none as to the necessity for you to possess a competent knowledge of the modern languages, and of logic and mathematics. The latter teaches you not to form conclusions without sufficient data, or rather the art of making correct deductions. Logic teaches you to be precise in your terms, and to be most careful in applying a fixed meaning to every word employed in your speech and writings.

To a defective education in these points we may attribute, in the writings of many talented medical men, an utter disregard to arrangement, lucidity of style, or closeness of reasoning, and an unphilosophic readiness to assume as facts, and generalise on, the crude and often careless observations of themselves or others.

Be assured, that the man of equal natural abilities who possesses a competent knowledge of science and language, ancient and modern, has a most decided advantage over his less fortunate contemporary. The public believe you learned—you have to sustain their ideal standard of excellence.

Assuming that you possess the necessary qualities, you may look forward with satisfaction to the day when you will be legally invested with the attributes of a medical man—viz., the means of preserving and maintaining health, prolonging and rendering life more comfortable; or, in the language of the learned Gaubius, you

become "the guardian of life and health against death and disease." You become the poor man's friend and benefactor—you seek his bed of sorrow, to soothe pain and sickness, if not to enjoy the inestimable privilege of whispering words of hope of returning health; or, in the words of the poet, say to him:—

"The poor, oppressed, honest man,
Had never sure been born,
Had there not been some recompense
To comfort those that mourn."

In the performance of your duties, you will have to declaim, with the eloquence of truth, against ignorance and prejudice—to expose the evils of the physical education of the great mass of the people, and point to the means for their removal—in short, to come boldly forward to sustain the great sanatory movement, which, to the honour of our profession, has been advocated, and its success mainly obtained, by the efforts of one medical man—Mr. Walker.

Now ought to begin an enlightened investigation into the laws of hygiene, this science being only in its infancy. What encouragement have the members of the medical profession (the only men really qualified) to pursue this useful branch. None, but their own feelings of universal philanthropy. The Government filch us of our opinions, and then give the executive to their own creatures.

There are a few rules which may be daily practised, connected with our duty to ourselves, our patients, and our professional brethren. To your patients be frank, kind, and generous; but let those feelings be tempered by firmness, and never forget your self-dignity, and keep in mind the quaint observation of Bacon:—
"Physicians are some of them so pleasing and conformable to the humour of the patient, as they press not the true cure of the disease; and some others are so regular in proceeding according to art for the disease, as they respect not sufficiently the condition of the patient." Let me especially beseech you to avoid an overweening anxiety for the "bubble" popularity: let no desire for this vulgar and easily attained prize induce you to give ear to disparaging reports of your fellow-labourers. The public is too ready to do this. When such an attempt is made in your presence, silence the party emphatically.

When we reflect that in medicine there are so many unsettled opinions, none save the most gifted may attempt to erect themselves into medical dictators; for, where truth is so difficult, how much of error may there be!

The whole scope and aim of the medical

profession is, the production of the largest possible amount of individual happiness and public good. In prosecution of this object the medical man necessarily makes large sacrifices of his valuable time in public institutions, as well as in private practice, and often without reward or gratitude; neither has he, like other men, the senate, or a coronet looming in the distance. To do this willingly, under chilling circumstances, a man must have his mind imbued with the highest moral sentiments, and cannot be a follower of the cold and heartless philosophy which would wish us to believe that all the glorious aspirations of the human mind perish in the grave.

The progress of the science of medicine concerns the whole human race, and its universality will do more for the extension of civilisation and universal brotherhood than at present we can conceive; and, indeed, if we were to trace the permanent benefits which have been produced to mankind by the members of the medical profession, in this onward movement, they would bear comparison with the best deeds of the many selfish and ungrateful legislators, the greatest military commanders, the most pious Churchmen, or the most generous of lawyers: the latter is indeed a *rara avis*.

I would now address the senior students, and in so doing, I shall make my remarks suggestive, rather than enter into details.

What is health? what is disease? are the first questions which a student with a reflective mind is likely to ask.

Before we can comprehend what is meant by health, and what is meant by disease, we ought to investigate the laws of life and organization; but as this would lead me into metaphysics, and far beyond my bounds, I shall content myself with observing that many of the writers on this subject have much retarded our progress in the knowledge of the relations of life to mind.

In the writings of Paracelsus to Descartes, including Tray, Darwin, Leibnitz, Priestley, Haller, Buffon, Needham, Maupertius, Robinet, Blumenbach, Gassendi, Cuvier, Lawrence, we have no satisfactory explanation of the origin of life, and whatever name they have given to what they supposed to be the cause of life—viz., "animating principles," "vital principles," "indivisible atoms," "spermatic powers," "organic particles," "organic germs," "formative appetencies," "formative propensities," "formative powers," "formative misuses," "pre-existing monades," "semina rerum," "plastic natures," "occult qualities," "certain unknown chemical affinities," each and all of them require something more, and this is, "the great final cause."

Take, for example, the opinion of those who believe that "life is gradually acquired by organization:" this still leaves unexplained why and how life is acquired by organization? Those who endow "atoms" or "globules" with an inherent power to select that portion of a plant or animal for which it is fitted, ought to be able to answer—Who endowed them?

Let us then return to the original question, what is health? Health may be pictured in a man who can, without mental or bodily pain, walk forth in the early dawn of balmy morn, and survey, on the one side, the mountains, clothed with the forests, it may be, of a thousand years, whose towering rocks proclaim to the geologist their comparative ages; the lichens, plants, and mountain shrubs, show to the botanist the present climatology of the locality. The goat, chamois, or more placid sheep, excite wonder in the mind of the naturalist, he knowing that in proximate spots fossils are found of animals differing entirely in character and habits, inferring wonderful past changes on the surface of our globe. On the other side, he surveys extending plains, fertilized by the glistening river, whose velvet banks give herbage to countless herds of cattle; the distant horizon, bounded by shadowy hills, whose deep glens and dells, darkening in the distance, shew—

"Deep solitudes and awful cells,"
"Where heavenly, pensive contemplation dwells."

But, apart from this feeling, which requires reflection to comprehend, and reason to connect the various laws and order of natural phenomena, there is that priceless pleasure, common alike to the prince and the peasant, freshest perhaps in the latter, arising from the simple sensation of "I live."

The physiologist, however, demands a closer definition. Liebig says—"Health is that condition of the body, where there is an equilibrium among all the causes of waste and supply, and thus animal life is recognised as the natural action of both, and appears as an alternating destruction and restoration of the state of equilibrium."

Carpenter says, in succinct and explicit terms—"Health may be said to be that state in which the various actions of life are normally or regularly performed."

Adelon says—"Health exists when all the actions of the body are executed with ease and liberty, and when there is a complete accomplishment of all the faculties, and a hope of their full continuance."

Brown says—"Health is the result of the equable and reciprocal action of the fluids on the excitable solids."

Now what is disease? We picture to

ourselves the effects of disease in the pallid aspect of the exhausted sufferer who, looking languidly forth from his curtained easement, sighs for the restoration of his past and not forgotten energy of mind and body,—thinks of the past pleasures of the chase, the moor, or it may be of a mossy bank, with a volume of Marmontel in his hand.

Here, also, the physiologist requires something more explicit:—

Liebig says—"It is disease when the sum of the vital force, which tends to neutralize all causes of disturbance, is weaker than the acting cause of disturbance; therefore, every abnormal supply or waste in all parts, or in a single part of the body, is disease."

The vital force above alluded to is stated by Liebig to be a "collection of phenomena produced by physical decompositions and combinations in the body: as in the closed galvanic circuit, in consequence of certain changes which an inorganic body, a metal, undergoes, when placed in contact with an acid, a certain something becomes cognizable by our senses, which we call a current of electricity; so, in the animal body, in consequence of transformations and changes undergone by matter previously contributing a part of the organism, certain motion and activity are produced, which we call life or vitality."

Carpenter says—"Disease is a disturbance or irregularity in the actions of life."

Adelon says—"Disease exists when the functions of the body are executed with difficulty and pain, when there is a perversion of the faculties, and an appearance of decay."

Laennec says—"Disease is a modification in the texture of the organs of the body, in the composition of its fluids, and in the regularity of its functions."

Brodie says—"Disease is the derangement of one or more of the animal functions, in many instances attended with an alteration in the structure of the body."

Another says—"Disease is an arrestment or interruption in the function of one or more organs of the body, producing generally an abnormal state of the secretions and excretions, and often followed by a change in the molecular structure of the texture and organs of the body."

Cabanis says—"Les impressions douloureuses constituent la maladie, comme les impressions agréables constituent le bien-être et la santé."

Dr. Gregory says, in his elegant Latin, "Morbus adest, quum corpus tantum a statu sano deflexerit, ut solitæ actiones vel prorsus impediuntur vel ægre aut cum dolore perficiuntur, et morbus non est unus, et simplex eventus, vel mutatio,

qualem in rebus inanimatis contemplari solemus et effectum vocare; sed series, sæpe longa, talum eventuum vel mutationem; quarum aliæ aliis causæ videntur esse."

Now none of these possess the qualities of a logical definition. They are not universal, they do not agree with the one thing alone, and are not "proper and peculiar to the one thing defined." Nor will they include all cases of either state.

The terms health and disease do not really admit of a strict definition, and ought to be considered relative terms only, and that between the two supposed extreme points an infinite series of gradations may arise. Men may attempt to define by broad distinctions these extreme points; but nature resists abrupt delineations, and will not always bend to suit the arrangements of man. Hence the difficulty of detecting the early changes, whether they be the cause or the effect of disease, arises from the abnormal gradually becoming engrafted on the normal action, so that it becomes a matter of great difficulty to say, where the one begins and the other ends. We cannot hope to remove this obstacle to advancement until we know more of the normal conditions of the human body, or in other words, of the origin of life.

How far a more intimate knowledge of causes will help us in our treatment of disease we can scarcely say.

The dogmatists hold that a knowledge of causes constitutes true medicine; whereas the empirics depend on facts alone, caring nothing for causes.

You must not, therefore, expect in medicine demonstrations equally clear as in the exact sciences. This may appear a defect; but you are to remember that you have to do with an organism differing from all others in possessing an intellectual and moral principle. Who can define the influence of mind upon matter? What the imagination may effect in curing, or in destroying? The physical as well as moral powers vary. No one individual resembles exactly another in health; why, then, should they in disease?

We have to take into consideration the influence of age, sex, temperament, climate,—which includes temperature,—humidity, barometric pressure, the seasons, the previous habits and diseases of the patient, his profession or trade, and, lastly, his moral and intellectual organization. The mysterious connection of mind with matter hinders us very often from arriving at a clear demonstration of cause and effect. The "post hoc, ergo propter hoc" is to be continually guarded against: but from a series of similar cases, after the employment of similar remedies, always terminating in health, we calculate upon certain effects,

and although we cannot demonstrate the cure of the disease, nevertheless we see the patient recover.

The various theories which have, during past ages, reigned in the medical schools are quoted as proofs of the instability of medicine as a science.

We are taunted with the doctrines of Herodiscus, Hippocrates, Asclepiades, Themison, Galen, the Arab school, Paracelsus, Hoffman, Staal, Boerhaave, Cullen, Brown, and others. Now there is a greater resemblance than appears at first sight. No one, as a whole, is true; but an amalgamation may yet be made, and firm principles deduced.

The very variability of disease gives a charm to the study and practice of physic; for there is an unceasing call upon the intellect to divine and explain the changes which hourly occur in individual cases. The uncertainty of the art of medicine is, therefore, more in appearance than real.

In our debates we dispute more upon how such and such an effect is produced, all agreeing that the event really does happen.

In other sciences are there no doubts and difficulties? And as to our sister professions, I think that, what with the discrepancies, contradictions, doubts, and dissensions in the *church*, and the torpid adherence to precedent, whether this be right or wrong, with all its glorious uncertainty, behind which the *law* is entrenched, and also the changeableness of civil government, we may fairly challenge superiority, and claim a more philosophical position than either.

There is still one most important subject to which, if I did not seriously advert, I should fail in my duty: I mean "clinical" or "bed-side instruction." At the bed-side the real and practical application is to be made of all the knowledge obtained from books and teachers; for they, in their perorations, as well as in books, are obliged, from the nature of their subjects, to describe each disease as if it were a separate entity: but at the bed-side you will have to learn the endless complications and varieties in disease. At the bed-side you will have to test the different theories which have been propounded, and the various therapeutic agents which have been described. In doing so, you will have to attain the valuable power of diagnosis. This must be the work of your own individual exertions. It cannot be taught; it *must* be acquired. You will have to learn that it is easier to describe a disease than to cure it, and that reasons are easier given than successful remedies. You will have to learn to avoid doing either too much or too little,—that is, to assist and not oppose Nature in

her operations: if she acts too slowly, to accelerate; if too rapidly, to retard. You will have to acquire a knowledge of the moral treatment of your patients; for on a proper application of this depends a vast deal more of your successful treatment than you can imagine, until you have watched the influence which your look, word, or deed, will produce on the sufferer. Remember that it is better to encourage than discourage; that faith and hope united may work marvels when aided by medicine, especially in idiopathic diseases, although, even in organic affections, their influence is not small. You will learn that drugs may sometimes be discontinued, and that the cure is to be completed by attention to air, exercise, and diet.

To diagnose between real and feigned disease is, in the army and navy, a most important branch of study; and even in private practice this knowledge is often required.

We are often called upon to visit cases, which, after careful investigation, we can only explain by inferring a perversion of the moral sense. The patient will make the most unfounded statements as to his or her cure; and if the medical man has not been often at the bed-side, he may make grievous mistakes by following closely the statement of the patient, and either do harm, or get laughed at. Neither will it do always to show that we are perfectly "wide awake." At the bed-side you have also to acquire your power of prognosis; for this, like diagnosis, cannot be taught, and than which, if given correctly, nothing is more startling to the bystanders: if you say, this case will die,—this case will live, you are looked upon as a prophet.

In short, you learn at the bed-side that theory and practice are two very different things; or, in other words, that medicine studied in the closet is a very different thing from that practised at the bed-side.

I must say that, with a few commendable exceptions, the pupils at this hospital do not seem to appreciate sufficiently the value of, and the necessity for, medical clinical instruction. Many of them are never to be seen in the medical wards. Perhaps those absenting themselves may argue that there is nothing interesting to be seen in those wards,—nothing that appeals directly to the senses or to the imagination. I have only to say that such reasoning, if acted upon, may lead to disastrous consequences. It is true that cases of acute disease—such as pneumonia, cerebritis, peritonitis—are less common than chronic cases; but the pathologist and the physiologist know that most important observations are to be made upon those cases of chronic disease; that in them the slow progress of remedies in

arresting disease, and in restoring health, is to be watched; and that, also, they constitute nine-tenths of a general practice.

If no more powerful reason can be adduced to promote attendance in the medical wards, a sufficient one exists—to attain a knowledge of auscultation and percussion,—two branches which can be effectively acquired only in the wards of an hospital; for no half measures in this subject will suffice; no solitary case listened to once, and perhaps soon forgotten, will give knowledge to the pupil; but it must be a succession of parallel cases, heard and listened to, so as to enable the observer to draw aural comparisons. The various sounds *must* be heard to be understood; for as well might we hope to learn music by the striking of a single chord, as to comprehend auscultation from a few hasty thoracic intonations.

In illustration, I can imagine no more painful position for a practitioner ignorant of auscultation to be placed in than, after having been treating, for months perhaps, a patient for enlarged liver, a man who, not having misused his time, can, by applying his ear to, and by a few taps with the points of his fingers on the chest, at once say,—Why this is a case of pleuritic effusion pressing downwards the diaphragm, and consequently giving an appearance of enlargement to the liver, which organ is quite healthy.

3rd. To those gentlemen who are on the eve of completing their studies, I would say—

"Be mindful of the wreaths your arms have won,
Your great forefathers' glories, and your own."*

But be mindful also that your labours as students of nature are not over, that you have reached the outskirts only of a vast field, upon which much work may yet be bestowed. To tell you what has been done is not my province, but I may bestow a few words on what has *not* been done.

Notwithstanding the progress made of late years in minute anatomy, where are to be arrested our further advances? By aid of the compound microscope, we may be enabled to trace the ultimate origin of being, or of those forces operating in the minute cells of organic structures.

We may be able to show in detail the resemblance, both in physiological and pathological products, in the animal and vegetable kingdoms, and also the similarity in the functions throughout all organic nature, leading us to look forward to a perfect unity in science.

It is established that most animal tissues

* Iliad, Book 8th, line 212.

are developed from cells, similar in all respects to the elementary cells of vegetables, yet it is not proved that all are; at least, there are anomalies to be explained.

Neither is it settled, "whether the germinal vesicle be cell or nucleus, or which is first formed, or whether 'macilaginous granules' produce by their juxtaposition a cytoblast of definite form, around which a vesicular membrane forms a closed cell, so that cell produces cell." How much also is yet to be done by aid of the microscope in organic chemistry. This is comparatively a new science, and there is no foreseeing the progress which physiology and pathology may make from its successful study.

We may ask—how is muscular fibre formed? It appears to be cylindrical, but is it an elongated cell? or is it a coalescence of cells? Is the thickening of the wall of the secondary muscle cell a thickening of the cell membrane itself? as appears to be the case in cartilage,—or, is it a secondary deposit upon the inner surface?

Crystallization is curious and wondrous enough, but when we come to compare its phenomena, and see its similarity with the attractive power which cells manifest, we are lost in amazement.

Notwithstanding the labours of a Carpenter, and many other physiologists, there is much to be done before we can fully comprehend the laws which govern the daily phenomena of life. The functions of several of the internal organs of the body are still "sub judice."

As regards respiration, the capacity of the lungs for air is not ascertained; the estimates of the various experiments differing most widely. It is also contended by some, that the exhalation of carbonic acid is a proof of actual secretion. The cause even of the respiratory movements is not settled. Neither is it certain whether the muscular coats of the bronchial tubes relax and contract during expiration and inspiration respectively.

The existence of a set of capillary vessels, which at the schools we are taught to believe, is doubted by many; they believing that the ultimate ramifications of the arteries pass insensibly into those of the veins. Those who believe that there are capillaries, suggest that their contractile coat regulates the calibre of the vessels. The state of the circulation in the skull, so long as the bony wall is perfect, is still undetermined; some contending that the vessels of the brain cannot contain more blood at one time than at another; others contend the brain is subject to the same variation, as to the quantity of blood contained in its vessels, as the other organs of the body.

The phenomena of inflammation, whether

the state of the blood be an effect or a cause of inflammation, is still undecided.

Notwithstanding the writings of Bell, Flourens, Desmoulins, Marshall, and others, the anatomy, physiology, and pathology of the brain and nervous system may yet be greatly elucidated. In the anatomy of the brain it is not certain whether the pale band seen in the nervous fibres is the proper nervous fibre, and that the white substance is only a sheath. We are not certain of the exact functions of many of the nerves, notwithstanding the apparent conclusiveness with which some *vivo-sective* experimentalists have written. Even the observations of Dr. Marshall Hall have not been fully recognised; and it is rather remarkable that, during some recent experiments in France, made upon bodies shortly after being guillotined, no reflex movement could be excited by pinching or other modes of mechanical stimulation.

Of absorption, there are various opinions; many disbelieve that the brain and the bones possess absorbents. Many think that the veins bear the chief office in absorbing, and that neither the lymphatics nor the skin have any such power. The opinion of Verhezan, that there is a distinct communication between the stomach and the bladder, is not explained by anything we know of absorption. The rapid manner in which fluids sometimes pass from the stomach to the bladder is not explained by absorption. A ligature on the pylorus does not prevent this disappearance.

Notwithstanding the investigations of a Letheby in toxicological chemistry, we have much to learn. We are not certain whether there are any acids, naturally, in the stomach. In "diabetes," we know not whether the secretion of sugar is from some cause "*sui generis*," or, whether there is some previous state of the system by which the digestive powers are so altered as to secrete sugar. Can sugar be formed *only* from substances in which it has previously been present? or may it be produced from substances in which it had *not* been previously by chemical tests detected? The cause of the sensation of hunger and thirst is unknown; indeed, the whole theory of digestion and assimilation requires further chemical observation.

Von Humboldt asks—"Who will venture to say that we yet know with precision that part of the atmosphere which is not oxygen, or that thousands of gaseous substances affecting our organs, may not be mixed with the nitrogen?"* With all the learning and labour of a Pereira, we are unable to explain the "*modus operandi*" of many of our remedies; but we value not

* Cosmos: Sabine's Trans., page 32.

the less the gigantic mass of information given to us by that gentleman in his valuable works, and the incitement he gives to pursue that most important department of medicine—"therapeutics."

With all the investigation of a Davies, there is much to be done in auscultation and percussion. Look also to the domain of surgery, where daily improvements are being made by Luke, Adams, and Curling, especially in the application of mechanics to surgical purposes. Although the practical department of ophthalmic surgery is far advanced, and the knowledge we already possess of the laws of vision is a fine illustration of the application of optics to the explanation of the physiology of vision, yet there is much to be explained. The mode by which we obtain a knowledge of the different distances of objects—how it is that an object, whose image is reflected on the retina inverted, should appear to the mind erect—how we see objects *singly* only, although we look upon them with two eyes,—are phenomena of vision unsatisfactorily explained.

When we consider the extraordinary effects which the full development will have upon science, of the ideas of Mr. Grove,* Dr. Carpenter, and others, on the correlation of physical forces,—we see that we are only on the threshold of the temple of science, and that we know not, nor can we conceive, what further advancement may yet be made by the mind of man.

"The various affections of matter which constitute the main objects of experimental physics, viz., heat, light, electricity, magnetism, chemical affinity and motion, are all correlative, or have a reciprocal dependence; that neither taken abstractedly can be said to be the essential or the proximate cause of the others, but that either may as a force, produce the others:"—such enquiries although not strictly medical, "may," as Dr. Carpenter says, "afford a precision to physiological doctrines which they have never before possessed, and open up a vast number of new lines of inquiry which promise an ample harvest of results, not only valuable in a scientific view, but likely to be fertile in application to various departments of the therapeutic art."

These brief illustrations are sufficient to show that your studies, extensive though they may have been, are far from being completed, and that in the language of Humboldt,—“What is perceived, is far from exhausting what is perceivable.”†

[To be continued.]

SINGULAR DEFECT AND IMPOTENCE OF MEMORY AFTER PARALYSIS.

A FARMER in the county of Wicklow, in comfortable circumstances, when fifty years of age, had a paralytic fit, in the year 1839; since that time he never recovered the use of the affected side, and still labours under a painful hesitation of speech. His memory seems to be good for all parts of speech except noun-substantives and proper names; the latter he cannot at all retain; and this defect is accompanied by the following singular peculiarity: that he perfectly recollects the initial letter of every substantive or proper name for which he has occasion in conversation, though he cannot recall to his memory the word itself. Experience, therefore, has taught him the utility of having written in manuscript a list of the things he is in the habit of calling for or speaking about, including the proper names of his children, servants, and acquaintances: all these he has arranged alphabetically in a little pocket dictionary, which he uses as follows:—if he wishes to ask anything about a cow, before he commences the sentence he turns to the letter C, and looks out for the word “cow,” and keeps his finger and eye fixed on the word until he has finished the sentence. He can pronounce the word cow in its proper place, so long as he has his eyes fixed upon the written letters; but the moment he shuts the book it passes out of his memory, and cannot be recalled, although he recollects its initial, and can refer to it when necessary. In the same way when he comes to Dublin, and wishes to consult me (for my name is among the indispensable proper names in his dictionary), he comes with his dictionary open to the hall door, and asks to see Dr. Graves; but if by accident he has forgotten his dictionary, as happened on one occasion, he is totally unable to tell the servant what or whom he wants. He cannot recollect his own name unless he looks out for it, nor the name of any person of his acquaintance; but he is never for a moment at a loss for the initial which is to guide him in his search for the word he seeks.

His is a remarkably exaggerated degree of the common defect of memory, observed in the diseases of old age, and in which the names of persons and things are frequently forgotten, although their initials are recollected. It is strange that substantives or proper names, words which are the first acquired by the memory in childhood, are sooner forgotten than verbs, adjectives, and other parts of speech, which are a much later acquisition.—*Dr. Graves, Dublin Quarterly Journ. of Med. Science.*

* Mr. G. shortly explains his views in his Essay, at page 13.

† Cosmos: Sabine's Translation, vol. iii. pt. i. page 23.

Original Communications.

CASE OF

ANEURISM OF THE HEART
THROUGH THE APEX OF THE
LEFT VENTRICLE.BY FRANK RENAUD, M.D.
Manchester.

CATHERINE CAIN, 28 years old, had been drinking and quarrelling with two other women on the 18th of February. On leaving the public-house some disagreement arose about a little money, when one of the women caught Cain by the throat with her left hand, and gave her a blow over the left malar bone with her right. She then struck her under the right eye. Cain began to "scream and shout," walked a few paces, staggered and fell, and in two or three minutes was dead. A post-mortem examination led to the discovery of an apoplectic effusion of blood, in quantity about a fluid ounce, which was dark-coloured and firmly coagulated, and distributed in the sub-arachnoid cellular tissue and meshes of the pia mater, around the medulla oblongata. This coagulum extended a little way along the base of the brain, and in the direction of the middle cerebral fissure. A small coagulum also extended through the fourth ventricle into the lateral ventricles. There was no bruising or laceration of the substance of the brain.

The pericardial surfaces were firmly adherent. The heart appeared larger than usual, and somewhat irregular in its outline. The left ventricle was hypertrophied, and at its apex there was a rounded opening through which a small bullet would pass. This communicated with an aneurismal tumour capable of containing from three to four ounces of fluid. With the exception of a little jelly-like coagulum, the sac was empty. The opening through the ventricle was well rounded, and had a tendinous-looking margin. The aneurismal sac was dense in texture, and upwards of two lines in thickness at the upper part nearest the ventricle, where the muscular fibres of the heart were partially expanded on its inner surface.

The valves of the heart and coats of the arteries were healthy, and but little blood was found in the heart.

The lower lobes of the lungs were œdematous. The spleen was enlarged to about thrice its natural volume. The stomach contained a considerable quantity of half-digested food. The abdominal viscera generally were gorged with dark venous blood, but were otherwise healthy, with the single exception of the uterus. This organ had been subject to chronic irritation, and a low form of inflammation, sufficient at some former time to have caused effusion of lymph, which had agglutinated the oviducts and obliterated their fimbriated extremities. The ovaries were tightly bound down with these bands, several of which stretched from different parts of the uterus and appendages to the omentum, mesentery, and peritoneum, covering the bowels. In one ovary there was an apoplectic clot of some standing and of the size of a hazel-nut. In the other ovary a somewhat similar clot existed, also a false corpus luteum which appeared two or three weeks old, and a second apoplectic effusion, quite recent, into a Graffian vesicle which was distended to the size of a walnut. The uterus was that of a person who had not borne a child.

It so happened that no history of this woman's symptoms could be gathered. The person with whom she lodged for six weeks prior to her death said she never complained of being ill, and appeared in good health. In this respect there is some similarity between the present case and that of Talma the French tragedian, reported by M. Biett in the 3rd vol. of the "*Repertoire générale d'anatomie et de physiologie pathologique*." In his case the pericardium was adherent throughout, and the aneurism at the base of the left ventricle was of the size of a small egg, and filled with laminated coagula. The muscular fibres were attenuated, and in part expanded on the inner surface of the tumour. During his lifetime it gave him no inconvenience, and appeared to have commenced two or three years before his death, whilst making some physical exertion in enacting Hamlet. According to the account of his parents, he at this time felt a burning heat in the region of the heart, and a feeling of "malaise" which lasted two or three days, but afterwards disap-

peared. He ultimately died of stricture in the intestines.

The present instance is the most perfect I have met with, either in works on pathological anatomy, or amongst the cases which have been collected, arranged, and reported by Mr. Thurnham, in the 21st vol. of the *Medico-Chirurgical Transactions*.*

DR. RAMSBOTHAM'S REPORT OF CASES

THAT OCCURRED IN THE EASTERN DISTRICT OF THE

ROYAL MATERNITY CHARITY.

[Continued from page 713.]

DURING the year 1848 there were delivered in the eastern district of the Royal Maternity Charity, under the superintendence of Dr. F. H. Ramsbotham,

1964 women—of which cases

21 were twins—one in about every 93·5 cases; of these, in 14 cases both heads presented; in 6 the presentations were head and breech, or inferior extremities; and in 1 case the first foetus presented with the head, and the second transversely. In 7 of these cases the children were both boys; in 9 both girls; and in 5 one girl and one boy.

1 was a triplet, the presentations being head, feet, and head, and the children all girls. The two first were born living, the third still—all at full time. Two of these placentæ were united closely together; the other was quite distinct and separate.

1063 children were males.

924 children were females.

1936 were presentations of some part of the head; of which 3 were face presentations—one in every 662·6 births, and one was an ear presentation.

43 were presentations of the breech or some part of the lower extremities—one in about every 46·2 births; of these, 6 were twins, and 1 was a triplet.

8 were transverse presentations—one in about every 248·4 births; of these, 1 was a twin, and 1 was complicated with partial placental presentation. In all the operation of version was performed.

* The morbid preparations are preserved in the museum of the Infirmary.

In 2 the placenta was entirely, and in 1 partially implanted over the os uteri—one in every 654·6 cases. In all three instances the children were turned, and all the women lost a considerable quantity of blood before delivery: 2 of them died; 1 from loss of blood twelve hours after labour, the other, seven days after, from hysteritis; and 2 of the children were still-born.

6 were complicated with dangerous hæmorrhage before delivery—not the result of placental presentation; one in every 327·3 cases. All these children were born naturally some time after the artificial rupture of the membranes—2 living, 4 dead.

In 10 cases the placenta was retained within the uterus, either by atony or irregular contraction of the uterine fibres, or by morbid adhesion between the placental and uterine surfaces, so as to require the introduction of the hand for its removal—one in every 196·4 cases. With all of them there was more or less hæmorrhage; and 1 of the women died nine days afterwards, of peritonitis.

8 were complicated with alarming hæmorrhage after the natural expulsion of the placenta—one in every 245·5 cases. The women all recovered.

5 women were delivered by craniotomy—one in every 392·8 cases. In one of these the ear presented, with prolapsed funis, and the other four cases presented no peculiarities. The women had all small pelvises; and the children were all dead before the operation was performed.

1 was delivered by the long forceps, in consequence of slight contraction of the brim of the pelvis, the child being still-born.

2 were delivered by short forceps, and in both cases to terminate lingering labour from deficient uterine action—1 in every 982 cases.

4 were complicated with true puerperal convulsions—one in every 491 cases, and one of these died. In all the cases the fits ceased upon delivery. Three of the children were still-born.

14 women died within the puerperal month, and all from puerperal causes—one in every 140·3 cases.

1918 children were born living.

69 were still-born—being one in 28·8 births.

Of the Deaths,

1 was from convulsions. The woman had 24 fits before delivery, but none afterwards. She continued comatose for two days; appeared to be recovering; but died on the 8th day, suddenly, without a recurrence of the fits.

5 were from hysteritis—one on the 4th, one on the 6th, one on the 7th, and two on the 9th day after delivery. In one case the woman got up and walked about, two hours after delivery, and was immediately seized with shivering; in two others the disease followed the operation of turning; in one the removal of an adherent placenta; and in the fifth it was not accounted for.

4 were from peritonitis—one on the 3d, one on the 8th, and one on the 9th day after labour. In one case the woman was suffering from general dropsy at the period of labour; in another the placenta was retained; and two cases were not accounted for.

1 was from acute bronchitis, on the 6th day.

1 was from muco-enteritis—the woman having drunk gin and porter soon after labour.

1 was 12 hours after delivery, under placental presentation.

1 was from hæmorrhage, occurring seven days after delivery.

It will be observed that in this year, 1848, we lost 9 patients of the disease which has obtained the generic name "puerperal fever"—5 from hysteritis, and 4 from peritonitis. This is *by far* the largest number of women who have sunk in any one year from these diseases, in the Eastern District of this Charity since I have been attached to it; and I was first appointed in 1824. It is worthy of remark, that this was the year in which the Asiatic cholera raged so fearfully throughout the eastern part of London; and it was during the latter part of the summer and the autumn that these deaths chiefly occurred. The year that stands next in mortality from these causes in my tables, is 1835, when there were three deaths from peritonitis, and two from hysteritis; and in this year, the influenza, which showed itself after the departure of the cholera, at its first visitation, was epidemic and very fatal. I have universally remarked, indeed,—what we might have *à priori* expected,

—that when any epidemic disease of a low type was prevalent, both have puerperal maladies been more than usually frequent, and also that the convalescence of puerperal patients has been more than ordinarily protracted and tedious at those times.

Of the still-born children,

10 were premature: of these 6 were putrid.

7 were putrid at full time, or nearly so.

13 were breech presentations: of these 2 were premature; 1 was putrid, and 5 were premature and putrid.

5 were transverse presentations.

5 were delivered by craniotomy.

1 was under entire placental presentation.

1 was under partial placental presentation.

4 were from dangerous accidental hæmorrhage.

1 was under lingering labour.

2 were monstrous.

With 3 the funis prolapsed by the side of the head.

With 1 the funis was tightly coiled round the neck.

With 1 the mother was labouring under acute pleuritis.

With 2 the mothers were nearly moribund.

With 1 there was diseased placenta.

2 were after an accident to mother.

2 were after the mothers had suffered from fright or passion.

1 was a face presentation.

3 were each the second of twins.

1 was the third of triplets.

3 were under puerperal convulsions.

ON THE PREPARATION OF MERCURIAL OINTMENT.

M. FOURNIER states that he has adopted the following process for ten years. The mercury is triturated in an iron or marble mortar, with a fourth part of the lard, to which a small portion of wax has been added. The remainder of the lard is to be added in portions in a melted state, as the previous quantities become solidified. This method gives a good ointment in the course of an hour. In the winter season suet may take the place of the wax. The success of the process depends more upon the mode of its performance than upon the addition of wax or suet.—*Journal de Chimie Médicale*, Septembre, 1851.

ON

IMPROVING THE CONDITION OF
THE INSANE.

BY HENRY MONRO, M.B., OXON,

Fellow of the Royal College of Physicians, Author
of "Remarks on Insanity," &c. &c.

IN my last observations on improving the present condition of the insane, I dwelt at some length on the injury inflicted upon poor but respectable patients by having no other asylum offered to them, through the dire distress of their disease, than County Lunatic Asylums or general hospitals for the poor. I suggested, as a remedy, the establishment of asylums for the middle classes, to be commenced by the aid of charity, and carried on by self-supporting means.* This was a subject which affected only a class. The matter to which I would now draw attention is one more comprehensive in its character, and one which I have found, by the experience of many years, peculiarly to require remedy. I feel that no one can truly appreciate the merits of the case so much as those who have had personal experience; and therefore, however imperfectly I may be able to support my argument, I shall, without flinching, endeavour to explain what I feel so strongly. The matter, however, which I would now discuss affects not only the happiness of the patient, but the honour and serenity of mind of his medical advisers: *I allude to a sufficient inspection, by those in authority, of private lunatic asylums.*

There are lying before me at the same moment the two documents from which I make the following extracts. They both of them interest me, because they touch upon matters which have weighed much upon my mind. The first awakes my sympathy, as being the work of honest men endeavouring to advance the interests of the insane in a bold and fearless manner,—and I say this, notwithstanding my belief that many of their ideas are impracticable and Utopian. The second carries with it no weight, as being the production of an anonymous writer; and its general tone does not excite my sympathy, except in the matter of the inadequate

nature of the present inspection of asylums. Of each I must say—*το μὲν ὀρθῶς εἶπε, το δ' ἡμαρτεν.*

The first is an extract of the alleged Lunatics' Friend Society, containing a summary of suggestions for additions to the law of lunacy. Amongst many other matters, it states that nothing but a weekly or fortnightly inspection can be adequate to prevent the abuses which still exist in private asylums; it goes on to say—"nor can any less frequent inspection do efficient justice to all parties concerned in the detention of persons alleged to be insane." The summary moreover urges that these inspections should be conducted by persons living in the neighbourhood.

The second extract is from a letter signed "E. B.," and published in the Provincial Medical and Surgical Journal (Oct. 1, 1851), in which the writer complains of the inquisitorial nature of the visits of the Commissioners of Lunacy—of there being no appeal from their decision—of their being utterly unable to acquaint themselves with the habitudes of the patients, however long their visits may be; and it ends with these words—"I presume to observe, that the law establishing the Commissioners of Lunacy is neither useful nor can be useful; it often promotes strife, it often engenders bitter feelings," &c. &c.

I agree with the statement of the alleged Lunatic Society in thinking that an inspection of private asylums approaching in frequency to what they demand, is necessary to meet the evils to which private asylums are prone. I say, in consequence, that the present mode of visitation is unequal to the work intended, and cannot do justice to all persons concerned—proprietor and Commissioner, as well as patient—till it is rendered more adequate to its work. But I repudiate, on the other hand, their theory that the inspection should be conducted by ordinary neighbours, however respectable their class; for I believe ordinary neighbours to be incompetent: "*ne sutor ultra crepidam.*" I say, instead of this, increase the number of Commissioners. If they are the shepherds, let them be equal to the wants of their flocks; if they are the supreme authority—the "star-chamber"—and proprietors, medical officers, &c., are to be their subordinates only (and I rejoice in this last fact as the only

* Vide Psychological Journal, Oct. 1851.

healthy and safe mode of proceeding), let them obtain the confidence of their lieutenants by being in a condition to prove their competency, by physical power as well as moral intention (which latter they have), and all will go well.

I agree with "E. B.," when he complains that the present board is inadequate really to know the habitudes and wants of the patients. Will the Commissioners themselves differ with him on this point? But I differ from him when he desires to do away with the board, *as I look upon it as the great antidote to the evils to which the private system is constitutionally and of necessity prone.* I would say to him, increase the remedies in proportion to the exigencies: "*Tu ne cede malis, at contra audentior ito.*" Do not attempt to ignore the exigencies and remove the remedies. If you have had any experience of the conduct of asylums before and since this board has been in operation, do not attempt it; humanity, common sense, ordinary business-like habits, say No! And if these appeals did not speak thus to you, the convictions of an enlightened age would render your attempts abortive.

I differ from him again when he calls the board a star-chamber; for I know by long experience that its members are freely open to reason, kindly disposed to fairness of judgment to the best of their power, and a body whom I should wish to meet every three weeks rather than every three months; because they are the surest relief amid those difficulties which must continually oppress honourable minds. I differ from him again when he looks on their visits as promoting strife and engendering bitter feelings; for my own experience has made me look to their visits as appeasing difficulties; and I can say this notwithstanding my conviction that their judgment is sometimes inaccurate, and notwithstanding my acquaintance with the fact that, owing to the paucity of their visits, superficial matters of comparatively small moment will often excite that interest and attention which greater matters, more hidden from view, fail to do. This, however, is only one of the evils which makes me say again, if they are the shepherds, let them be equal to the wants of their flock.

And what are these wants? What ought we to expect of the Commission? Is it to be only a body of men who will

listen to complaints only when they are expressed, or able to be expressed; or a body competent to seek out and detect the infirmities they are bound to remedy? Surely, in the guardians of the insane, who often will not, and more often cannot, speak for themselves, the latter degree of care, and not the former, is requisite. Let all those who feel assured that medical proprietors cannot any longer occupy at the same time the place of judge, jury, advocate, and prisoner at the bar,—that they must not, in short, be their own judges,—let all who feel assured that the Commission of Lunacy has done good service, and that they could do much more, and meet the exigencies of the case if they were only equal in physical force to these exigencies, join in endeavouring to increase this board.

But I will argue this matter more in detail, in the hope that, by the statement of the experience of many years, I may influence those not conversant with the bearings of the question.

What sort of supervision ought we to expect of the Commission in Lunacy? There is, I presume, in the present day, no occasion to advocate the necessity of placing the supreme care of the insane in disinterested hands; and this especially in the case of private asylums. Intelligent philanthropy has stifled opposition on this head. But the question which may be, and no doubt is mooted, is, what sort and degree of inspection is rightly to be expected in private lunatic asylums? If we settle this, no doubt all will agree that the workman must be equal to his work,—the Commissioner to what he undertakes. What, then, is to be expected of the Commissioners by the public? Some (not much acquainted with the peculiar nature of a Commissioner's duties) may be content with this analogy—viz. that he occupies the place of a general over his soldiers, or rather an inspector of schools or of prisons over their several departments (proprietors and medical men holding the place of subordinate officers); that all that can be expected of him is to look to general interests, and to entrust all matters of detail to those under him. This loose mode of argument might do pretty well, were the circumstances at all analogous. But are they so? In the army, common interests unite, and similarly actuate the superior and subaltern officer. In national schools and prisons,

private motives are comparatively inadmissible. *So far considered*, the inspection of *public* asylums might have some analogy to these instances, but surely not to that of *private* asylums. True, common interests likewise unite the Commissioners with proprietors of sensitive and refined minds—namely, philanthropy and the good of the insane. But how is it in the case of those superintendents who are influenced as much (if not more) by private gain as general philanthropy? The interests of superior and inferior officer are now opposed, and consequently a very different sort of inspection is required. I would be far from saying that we cannot in very many cases trust to the full exercise of the high motives just alluded to. I am far from thinking that proprietors, &c., are not as capable of being actuated by high motives as any other body of officers similarly circumstanced; but the dissimilarity of their circumstances has compelled the public to come to the conclusion that a special guard must be raised against the operation of the less worthy motives, and that, for safety's sake, we must provide in distrust when self-interest is so unavoidably opposed to general philanthropy.

But, besides the difference of position between the various officers in the cases above named, the difference of condition of the body on whom they are to act makes a clear distinction: a soldier, a prisoner, or a scholar, notwithstanding their subordinate state, are capable of making an appeal to the higher officer in one way or other; the insane, on the other hand, often cannot, and often will not speak for themselves.

Is there any one, however, who has thought on these matters, who would be content that the relation between a Commissioner and a patient should only be the same as that between a private soldier and a general officer, or a scholar and an inspector of schools? Has the enrolment of the one the same cause for anxious investigation as the confinement of the other? Does the continuance of a soldier in the army, or a scholar in a school, require the same heedful watching as the continuance of a patient in a lunatic asylum? Does not the most common observation tell us that the judicial office is constantly required in the one case, and seldom in the other, and *that a Commissioner must*

be something more than a general supervisor.

But I do not arrive at this conclusion from general theories, but from constantly occurring experience. I will state, therefore, a few of the occasions where a general supervision does not answer, and where a much more frequent visitation than at present occurs is needed; and will not only ask the public whether they esteem it to be needed, but ask them which needs it most—the patient, the medical proprietor, or the commissioner himself?

1. *Frequent visits are necessary to free the minds of patients of injurious anxiety.*—It frequently occurs that a patient, insane only on a few points, and who can argue very well on most subjects—who is clear-headed enough to know that a private gain is obtained by the proprietor out of his residence in the asylum—cannot be persuaded that justice will be done to him, and that he will be released as soon as his discharge can be permitted with any propriety. No amount of kindness or reasoning on the part of those connected with the asylum can remove his suspicions. And are we to wonder at this, when the patient knows not into whose hands he has fallen, but knows the circumstances of his residence; and more than this, when the patient cannot believe himself to be the least ailing in mind, and thinks (as most do who are not getting well) that conspiracies are raised against him, and that he is the victim of injustice from the first, distrusting friends and medical men alike? Under these circumstances, it is often very useful to be enabled to say—"The Commissioners will soon be here; you know they are a board who can be influenced by no motive but justice to all: believe confidently, therefore, that you cannot be ill-used with impunity." Upon this, patients cling to the prospect of seeing them: they *do* feel in some degree assured, and, in consequence, trust their medical men and attendants more, and, by degrees, obtain that ease of mind so necessary for a cure. I grant that nothing will satisfy some; but many are capable of appreciating the merits of the case. Day, however, after day passes by, and no Commissioners come: then begins the question, when will these my judges be here? The long delay occasions

anxiety and doubts most injurious, not only to the patient's mind, but to the medical man's character for truthfulness. Three months may easily pass away; and more than this, the interval of five months may not be brightened by their long-desired visit. The patient may come and go easily without seeing any Commissioner, and often does! Is this satisfactory, when the Commissioners are esteemed the ultimate judges, and ought to be so? Would the Commissioner himself feel more satisfied than the medical man, could he know the anxiety his delay had occasioned? And yet it is not his fault: he is bound to visit only four times in the year, and it is very desirable that these visits should be made at very uncertain intervals: thus three months *must* occur between some of the year's visits, and often four, five, not to say six months, may occur. It may be said by some (and especially by those whose great object it is to keep up the tradition that mysterious codes of moral discipline are necessary for the guidance of those who treat the insane) that it is very imprudent, on the part of a medical officer, to argue in this way with his patient; that quiet reserve is necessary; that reasoning is well enough for the sane, but not for the insane; that there is a broad and distinct line between them; and that those on one side are incapable of appreciating that which those on the other side desire so much, and take so much consolation from. But I repudiate such doctrines in treatment, when they are expressed as a general rule, however much I may see their necessity occasionally. Great discretion, and the most clear distinction of the individual characteristics of each case, is required on such subjects as these; and, for the most part, common sense is a far better guide than would be learned dogmas. The more we advance really in the study of the insane, the more we shall find out the absurdity of precise definitions, and the useful nature of common sense, humanity, and moral influence. The line between sanity and insanity—between those inside and outside of asylums—or rather between those who are, and those who ought to be confined—continually lessens as we advance in the investigation of mental phenomena; and I attribute the greatly increased ratio of recoveries in the pre-

sent day, in great measure, to the adoption of such comprehensive views, and the surrender of narrow-minded theories. Ask those who have gone through the ordeal, if they do not remember, as one of the bitterest circumstances of their lot, the being placed out of the pale of those rules which control their fellow-creatures; and, if the fact of being treated with common sense and kindness, as if they were still moral agents, has not been one of the brightest and most curative points of their sad history. Unrestricted confidence between patient and physician may be often injurious, I grant, but the contrary extreme is far worse.

We are but still making strides out of that deep chaos of ignorance and gloom amid which our ancestors wandered when they sought to relieve insanity. True, we have escaped from those dark scenes,—when the absurd theory existed, that chains, darkness, and the scourge, were necessary for the relief of the *fully* distracted mind, though sympathy and every moral relief was still permitted and deemed essential for *half*-distracted minds,—and when, worse than this, this line between these two classes was settled by some grave young physician whose mind was irremediably prejudiced by mysterious dogmas;—true, we can all of us thank God that we are free from those scenes of living burials, so deep, so far removed from the hope of any resurrection to all that they once loved again;—true, we can hardly endure to contemplate such awful ideas now in this age of light—that even in tragedy we could not endure such hopeless misery—that our sympathetic eye turns sickening away, unable and unwilling to penetrate the gloom;—but it is also true that we cannot be esteemed really free from the paths of ignorance till we view the effect of moral agents sufficiently, and, forgetting all rigid lines of demarcation, look on insane phenomena as full of varying degrees, and differing from the phenomena of the sane by a most imperceptible gradation. But I must apologise for this digression, and proceed with my argument.

2. *Frequent visits are necessary to free the mind of the proprietor in doubtful matters of discharge.*—To give a second case indicating the necessity of more frequent visits, it continually

occurs that the medical adviser has a *bonâ fide* desire for the judgment of the Commissioners. Such a case of perplexity as the following arises, wherein only a perfectly unprejudiced judge can give a satisfactory opinion:—A patient gradually recovers from a very insane condition, and continues pretty well for some time: there are a few points in conduct and conversation which show that health of mind is not fully restored; but still his continuance in a lunatic asylum, amid the distressing scenes of acute insanity, is, to say the least, very questionable. The medical proprietor can hardly avoid feeling biassed one way or the other in this dilemma; for the points of the argument before him are these:—I doubt whether the patient should remain; I know that it is for my own advantage that he should remain (these two facts must almost of necessity arise before his mind—it is useless to pretend that the second is wholly forgotten); but the third point is very differently settled by different minds; for the sensitively refined mind says at this juncture, “He shall leave me;” while the less refined man says, “I will keep him.” Both verdicts are biassed: the one dreads self-interest too much—the other dreads it too little. It will be said, the good and upright man should neither give way to the one or the other phase of feeling: he should leave out of consideration all matters except his patient’s good. This is no doubt the right course to pursue, and *what all good men aim at*; but it is utopian to believe that it generally exists with any degree of real meaning. Much more probable is one of the two conditions just given; and of course, in proportion as men’s minds are not sensitively refined, the verdict of detention will arise. This may appear a strongly drawn and improbable dilemma, but I believe it to be a very common one; though the habits of thought in many people have become so habitual, and so unconsciously arrived at, that many of their own motives and impulses escape their detection. In such a case, then, as this, the arrival of the Commissioners is a boon, and their prolonged absence a source of trouble, which is felt in proportion to the sensitiveness of the superintendent.

3. *Frequent visits are wanted to settle matters of unavoidable disagreement be-*

tween patients and their ordinary superintendents and advisers.—Besides the question of discharge, questions about kindness of treatment, the degree of liberty permissible, and other matters of daily conduct, may sometimes arise, and will arise, very probably, in proportion as superintendents show an anxiety to be kind; for, paradoxical as it may seem, patients will continually, while they appreciate the kindness, take a malicious pleasure in not only trying to manifest indifference to kindness, but in making charges against a superintendent for his very kindness. They are singularly like capricious children in this respect, and cause much doubt and anxiety to the minds of those who have them in charge; and however desirable such persons may be to rule by good will, they are driven to the necessity of hiding a kind intention under the appearance of such firm resolution as may sometimes bear the aspect of sternness. In such cases, where effort on the part of the superintendent only increases discontent, and where nothing apparently will produce satisfaction, it is a relief to him to refer the matter to the Commissioners, while he continues the course which he judges to be best: and it is far better that he should do so; for it is good for the patient that he should feel that the judgment of the superintendent is not easily subject to change, or his authority to be overturned.

Should any proprietor or superintendent feel that such questions do not arise in their case, and lay any flattering unction to their soul on that account, I should feel sorry for them rather than the contrary; for I believe that such difficult circumstances as I speak of may be easily avoided by a system of selfish reserve with patients, by not allowing them such a favour as even to listen to their complaints, &c.; and I believe such circumstances are increased by anxious desire to do all that can be done for a patient: but whilst I believe this, I cannot but hold that more danger to the patient arises from the too severe than the too indulgent system.

Such are a few of the evils which arise out of the present inadequate mode of visiting, and one of the peculiarities of the case is, that these evils are felt the more in proportion as the superintendent is anxious to fulfil his duty rightly. It is comparatively easy to

avoid the reproof of the Commissioners, and escape animadversion from without. Nothing but direct misconduct would ensure the one or the other. Indeed, direct misconduct would not ensure the latter and more dreaded evil (public animadversion), unless accidental circumstances compelled it into notice. It is difficult, however, to escape free from the challenge of conscience; and, as matters are at present, I believe that many men of refined feelings would refuse to undertake the proprietorship of private asylums, unless the circumstances of family connection, &c., almost compelled them into this course. There is something so terrible to a sensitive mind in the possibility of his motives being misinterpreted, and his actions misjudged,—and that, especially in a case where all the world are inclined to suspect him, and where his less conscientious colleagues often deserve suspicion,—that no wonder he withholds his steps before he enters upon ground which has so much the nature of a quicksand; and thus the event is, that those who are really best suited to this anxious and responsible work are excluded. On the other hand, could he feel that he had a competent superior to rely upon, for freeing him from aspersion, and assisting him in difficulties, he would no doubt feel the ground sufficiently secure to invite him. We read that rulers are not only to be a terror to the evil-doer, but also are for the praise of those who do well; therefore, however much we may feel that the comfort of a good conscience is sufficient, we are authorised in saying that few things are more encouraging to a proprietor or superintendent, than to hear his work duly appreciated and justly praised by those placed over him: but this cannot be fully realized until he knows them to be competent judges. This is the case in all departments, but in the case of the insane it is peculiarly felt. For, owing to popular agitation, popular suspicions, and lack of confidence on the subject of private asylums, praise and blame must bear almost a morbid degree of importance. A person may so easily be grievously injured without pity, and so grievously injure others without detection, that until more healthy principles are instilled into the system, fruits of morbid growth must appear.

Remove the opprobrium from the

associations of a mad-house, if you wish the care of the insane to progress; make this branch of the profession a channel agreeable to men of the highest sense of honour. Do not adopt the short-sighted policy of saying that mad-houses must bear the opprobrium, if they produce the profits. Do not thus demand a secondary class of men, and refuse the highest class. Do not trust to the fact of there being honourable names enrolled in this branch of our profession; for surely it is beginning at the wrong end, that honour should be shed upon a work by individuals engaged in it, rather than that the work should be worthy to confer honour on the individuals.

4. *Frequent visitation is necessary to free the mind of the Commissioner of those inaccuracies of judgment which rare visitation engenders.*—But before I conclude the narrative of evils out of rare visitation, I will mention one which these reflections on the morbid importance of praise and blame naturally suggests, and which affects the relation between commissioner and superintendent, rather than the patient, although the relation between patient and commissioner is by no means free from being injured by it. This evil is of a general nature: it concerns not the committal of, discharge of, or conduct towards, a patient directly; it is not likely to arouse public feeling, as it has no heroic terrors enveloping it; but it is a petty annoyance, which it will be well to have removed. I mean the fact, that rare visits cause a certain amount of inaccuracy, unreality, or rather superficiality of judgment on the part of the Commissioner in matters of detail, which is always undesirable, and sometimes annoying, and entails an appearance of caprice which is far from intended, and cannot be avoided. Take the following example of the results of a general and inaccurate visitation:—A large asylum is kept in good order—clean, comfortable, and suitable to the patients' condition. The Commissioners visit it, say in January; they remark upon its cleanliness, &c., very satisfactorily. In February the superintendent thinks he will try to raise the whole status of the place; it is very large, he can only begin with a part; this part is completed in March; the Commissioners come again, are struck with the superiority of the renewed part, their eye falls upon the

part not yet renewed, and the consequence is a remark (kind and unimportant most probably) that such rooms want attention. The superintendent cannot of course do otherwise than take the kind remark in good part, but still he feels it arose rather out of the contrast of the old and new, than from any real imperfection; he feels that the judgment in the two cases did not bear a just proportion; that he had almost better have left the house as it was. However, his own inherent sense of what is right is his guide, and he goes on in his undertaking. Now, though no material harm is done, still it would have been very advisable that the Commissioner should have been in the position to sympathise with the superintendent more; in other words, to really understand all the bearings of the case. The Commissioners are not in fault, the superintendent is much less in fault; the mishap arises from the paucity of visits, and want of accurate observation: that accurate observation so desired by the well-disposed, so stirring to the indifferent, and so needed by the neglectful.

But this inaccuracy of judgment, or rather, insufficiency of acquaintance with the merits of a case, does not fail to injure the Commissioner in his relation to the patient. For also when visits have had a long interval, those charges so frequently noted down against proprietors, those threats of legal vengeance, &c. which none can avoid, change their course, and are now directed against the Commissioners: indignant remonstrances about this long neglect (which is often morbidly thought to have a personal application) are heard, and contempt for their judgment, when the medical adviser or others refer to it, is not unfrequent.

I shall not on this occasion trouble my reader with any more cases of the evils of rare visitation, as I fear I have already occupied too much of his attention. But, before I conclude, I would have it observed, that in this narration of the evils of rare visitation, I have not alluded to any of those *possible* evils which possess much more dramatic effect, and are far more alarming in their character, than those which I have mentioned—I mean the evils of direct misconduct, cruelty, &c., on the part of proprietors and superintendents. I have purposely abstained from them, as

my wish is not to show what *might* result in the case of evil-minded men, but what *must* result in the case of men with the best intentions. I abstain from such discussions, because I believe (as things are at present) that the public are excited more than enough with possible evils,—that such bodies as the alleged Lunatics' Friend Society do not allow me opportunity to speak on such subjects; because I believe that the increased enlightenment of the age,—the happy circumstance of neglect and misconduct being so unfashionable as they are,—the fear of public indignation,—and the degree of inspection which already exists, are arguments sufficient to render gross misconduct infrequent and impossible, even amongst those who cannot appreciate any high motives of action. But even if this were not the case, and if gross misconduct did frequently occur, I would not dilate on such arguments for increased visitation; for they would be too apparent to make it necessary to expatiate upon them, and foreign to my purpose in writing these remarks; the great object which I have in writing them being, to ensure the best treatment for the patient, and to free honourable minds from unjust suspicions.

I will, in conclusion, observe, that when I demand that the Commissioners should be in a position to be conversant with the habitudes and wants of each individual patient, I do not require by any means so much as may at first sight appear. For it is well known, that the vast majority of those under their charge are fatuous and imbecile persons; that out of an asylum of 50 insane, there are not probably above 8 or 9 who would require much attention; and that to expend much on the remainder would be to throw it away altogether. And thus, though many thousands may be under the charge of our commissioners, not above twice as many hundreds would be objects of much individual care and anxiety. Now this fact makes the case of complete supervision, and accurate acquaintance with the details of the work for which the commission is generally understood to be responsible, possible, if only an enlarged staff was organized.

I will conclude this letter with this remark,—that this increased visitation which I have proposed, this taking of the legal responsibility incurred by the

detention of patients in private asylums off the shoulders of the inferior officers, and placing it on the shoulders of the superior, will do good service, and that it will enable the medical officer to attend to his own business without interruption, and diversion of attention. As things are at present, the so termed mad doctor is as much of a lawyer as a physician,—he has to think of his position in a court of law, as much as of the cure of his patients. The continuance of this the medical man ought not to desire; and should his love of display, and interest in dabbling with other professions, cause him to desire its continuance, let him remember that, among other things, the public are tired of his presence in law courts, and wish him well back again at the bedside of his patient. His opinion must, of course, be taken as regards the consignment and discharge of patients, &c.; his evidence will, of course, be required in litigated cases. But it will be good for all parties, when his civil responsibilities weigh less upon him, and his professional and moral occupy as much as possible his sole attention. Surely, to be watching the use of remedial agents—to be raising the hopes of his despairing patient by kindly sympathy and firm control—to be exercising the duties of blessed charity in that course of life in which he is placed, is far more the duty of the physician than to be acquiring readiness and confidence under cross-examination, and mixing himself up with the difficulties of legal life.

ENCEPHALOID TUMOUR BETWEEN THE RECTUM AND BLADDER, WITH THE SAME DISEASE IN THE LIVER.

DR. JACKSON reported the case which he had recently observed, and which occurred in the practice of Dr. M. S. Perry. The patient was 64 years of age, had formerly been a seafaring man, but for many years had led a very sedentary life. Subject to hemorrhoids, and habitually costive; but otherwise healthy. Last February there came on pain in defecation, and often so urgent as to require opiate injections. Large doses of cathartic medicine required at first; but about the month of April diarrhœa came on, and continued almost without intermission until death. Extensive sloughing took place about the months of May and June, and with much relief to pain, though there continued much tenesmus; dej. involuntary. In May and June,

hemorrhage occurred frequently, and to such an amount as to threaten life. Patient also suffered much from dysuria, became greatly reduced, and gradually sank under the disease, but without any symptoms referable to the liver.

On dissection, the cavity of the pelvis was found to be filled by an extremely soft and well-marked encephaloid mass; partly white, but more or less coloured by blood, of which there was a considerable effusion. In the midst of it was a cavity one and a half inch in diameter, and formed perhaps from such an effusion; the inner surface being generally smooth, and of a deep brown colour, but having some old coagula adhering to it. The rectum had sloughed entirely away, to the extent of about five inches; commencing just above the anus, and involving the whole circumference, except for a narrow, irregular, thin strip. The edges of the intestine were soft and much discoloured, but not at all carcinomatous; the mucous surface just above the disease being healthy; and it was upon this last circumstance that the tumour was supposed to have originated externally to the intestine. The large intestine contained throughout a considerable quantity of soft fæces. Bladder somewhat reticulated upon the inner surface, otherwise not remarkable.

The liver contained great numbers of carcinomatous masses, generally tinged by effused blood, though some were of a pearly white colour. Hemorrhagic tendency, strongly shown, though there were no large effusions. The most unusual appearance in this organ was the formation of cysts, varying from half an inch to an inch in diameter; some contained clear, yellow serum, and were lined by a serous-looking membrane; others contained almost pure blood, viscid and very dark; but generally there was a mixture of blood and serum. As in the case of the cyst in the pelvic mass, the inner surface was often smooth, and of a dark brownish colour, as if formed from the effused blood, with same opaque buff-coloured deposit, which under the microscope was found to be fat; other cysts were lined by a white encephaloid substance, or by a mixture of this and effused blood. In one or two places, there was found, to the extent of about two-thirds of an inch, a very delicate, yellowish, lax, cellular tissue, infiltrated with serum, but quite defined, and without a trace of encephaloid or effused blood; an appearance not very unlike what is occasionally found in the brain after an old apoplectic effusion. Intervening structure healthy, as usual in these cases. Organ not enlarged. No peritoneal adhesions; nor was any further disease found in the other organs.—*American Journal of the Medical Sciences.*

MEICAL GAZETTE.

FRIDAY, OCTOBER 31, 1851.

WE elsewhere insert the Classical and Mathematical questions proposed for the first day's examination of medical students by the Court of Examiners of the Apothecaries' Society.* Our object in printing these papers, is to show to those who are now commencing their medical studies, that although this examination is at present voluntary, they must not expect to escape from a searching inquiry into their general knowledge of classics and mathematics. As we announced in our last number, ninety-three gentlemen presented themselves at this examination, and of these, sixty-nine passed. The rejections were, therefore, about one-fourth, or nearly twenty-six per cent. It would be interesting to know what proportion the number presenting themselves for examination, bore to those whose names are now for the first time registered as students of the Metropolitan and Provincial Schools. The examination appears to have included not merely first year's men, but other students desirous of escaping the technical examination in medical Latin at the termination of their studies.

Of the 69 students who passed their examination, 33 were Provincial, and 36 only are enumerated as residing in London, or connected with London schools. Of the 36 metropolitan students, the names of 24 only are assigned to particular schools, and of these, there were from St. George's Hospital 5; Guy's Hospital 5; St. Bartholomew's 3; Middlesex 3; London Hospital 2; St. Thomas's 2; Univer-

sity College 2; King's College 1; Westminster Hospital 1.

The fact that 69 gentlemen, just beginning their medical education were able to pass this examination satisfactorily is highly creditable to them, and it holds out a good prospect for the reform and improvement of the status of future medical practitioners.

ON former occasions we have strenuously advocated the interests and claims of the Assistant Surgeons of the British Navy, and have asserted their right to the accommodation and position to which, by their profession, as well as by their naval rank, they are justly entitled. The subjoined documents, recently issued by the Director General, lead us to entertain the belief that the full privileges of Assistant Surgeons, as ward-room officers, will before very long be conceded by the authorities at the Admiralty. We may mention also, that at a recent visit of the Lords of the Admiralty to Her Majesty's steam-sloop *Virago*, at Devonport, their lordships directed that a full-sized cabin should be prepared for the use of the assistant-surgeon of that vessel. All opposition to so just and reasonable a demand must ultimately vanish, and we are disposed to regard the circumstance now mentioned as an indication of a change of conduct towards these ill-used officers.

The following orders from the office of the Director General of the Medical Department of the Navy are highly important, both to science, and to the officers whom they concern:—

DIRECTOR GENERAL OF THE MEDICAL
DEPARTMENT OF THE NAVY:

(Circular.)

Admiralty.

SIR,—Having deemed it advisable to require journals from the assistant surgeons of her Majesty's ships, in addition to those already established for the surgeons under whom they serve, and

* See page 780.

also from assistant surgeons in charge of stores, in addition to those they now send, I have given directions for a supply of the blank journals in question to be forwarded to the several naval hospitals and dépôts at home and abroad, to be furnished to the assistant surgeons on their application for the same. You are, therefore, to make the necessary demands accordingly, and to give a receipt for what you may obtain.

In keeping up these journals you must exhibit your talent, industry, and neatness, and *no reason short of serious illness* will be admitted as an excuse for neglecting this important part of your duty, which must be certified by the surgeon.

The journals are to be transmitted with those of the surgeon (to whom they must be delivered in the event of your leaving the ship), or, when there is no surgeon, by any other safe conveyance by which expense shall not be incurred.

You are to acknowledge the receipt of this letter.

I am, Sir, your humble servant,
 _____, Director General, &c.

_____, Assistant Surgeon, H.M.S. _____

ASSISTANT SURGEONS.

1. Every assistant surgeon serving under a surgeon is to keep a journal, in which he is to enter, in brief but concise terms, every circumstance affecting the health of the crew.

2. In this journal he is daily to note, in a tabular form, carefully ruled, and similar to that which follows, the minimum, maximum, and, as nearly as can be ascertained, the medium temperature of the external air; and in the same manner the temperature of the deck on which the men are berthed, and the stoke-hold in steamers when under steam; the direction and force of the winds, the kind of weather, geographical position of the ship, or latitude and longitude; and, if he has the opportunity, the height of barometer, together with any unusual meteoric phenomena that may be observed.

3. He is also to note when the issue of fresh and salt provisions to the ship's company takes place; when lemon juice is issued, and when its use is discontinued.

4. When infectious or contagious,

epidemic or endemic, diseases make their appearance on board, he is, by a careful investigation into all the circumstances connected with the first cases, to give an account of their origin—of the manner in which they were contracted—of their progress and decline; mentioning whether they were communicated to other ships, or extended to the shore, and also the means taken to cure or eradicate them.

5. He is to place on record the names of men killed, drowned, or seriously injured, specifying the cause of death, nature of the wound, and how inflicted; and also the names of men invalided, sent sick to hospital, or to any other place out of the ship.

6. When boats are detached, in unhealthy localities, he is to endeavour to obtain, and to place in his journal, a nominal list of the men sent in them, stating the time of their departure and return, and also the influence which the climate, the weather, or other agencies appear to have had upon them.

7. He is carefully to observe and detail the effects produced by particular localities on the health of the men, whether resulting from exposure on board or on shore, on duty or on leave, or from over indulgence in articles of food or drink. For further details required to be noticed occasionally in these journals the assistant surgeons' attention is especially called to the 30th, 31st, 32d, 33d, 34th, and the 40th articles of the surgeons' instructions.

8. He is to keep a copy of the surgeon's daily sick book, from which yearly, on the 31st December, or up to the time of his leaving the ship, he is to make out and to insert in his journal a nosological table, according to the form now in use for the quarterly returns.

9. As these journals are in some respects intended to supply the deficit or loss of the surgeon's accounts, the surgeon is to afford the assistant-surgeon every facility for obtaining the details necessary for their completion; but, as they are further and more especially intended as a means of enabling the director-general to form an opinion of the ability, zeal, and the attention to his professional duties of the assistant-surgeon, every assistant-surgeon is most distinctly to understand that, unless his journal be sent into office in a creditable manner, it will effectually pre-

vent the director general's recommending him to their lordships for any special appointment, or for promotion.

N.B. When the first table has been completed, and the remarks are written out, the assistant surgeon must make out for himself the forms for succeeding months. It is calculated that two or three pages will suffice for recording the events of the month; but occasionally, according to the importance of the matter to be communicated, more space may be required: the journal may then be enlarged by adding to it foolscap paper of a large size.

Each journal to include about one year.

Naval medical officers enjoy advantages and opportunities for scientific inquiry which are not possessed by the surgeons of any other class of vessels, nor of any other position or station on shore. By the reports which will henceforth be required of him, the ASSISTANT SURGEON has more definite duties assigned to him—his profession becomes more strictly and exclusively his pursuit; at the same time he is made conscious that, while he is aiding in the advancement of scientific knowledge, his own promotion and prospects in life are, in a great measure, dependent upon the manner in which his journal is kept.

It appears to us that such requirements should be met by suitable accommodation for the performance of these newly-assigned duties. How any accurate record of facts or opinions can be made in a noisy midshipmen's berth, is not very obvious; and it is therefore probable that, unless the assistant-surgeon becomes a ward-room officer from the time of joining his ship, the orders of the Director General cannot be carried out.

liberty is separated from license. In France, however, the enforcement of a wholesome restriction is not regarded as tyranny—and certainly no European people know better than Frenchmen what is tyranny.

In London it is thought wise that no let or hindrance should be presented to the adoption of any pseudo-medical practice by any individual,—whatever may have been his previous pursuits or deficiencies of education. Thus, a grocer has been allowed to administer the most potent drugs with impunity, although a fatal result followed his rashness.

In Paris quite another view is taken of such recklessness and presumption. Within the last few weeks the Parisian Tribunals have inflicted heavy fines, and long imprisonment, upon persons who dared only to vend drugs, without a license in pharmacy.

In England it was with much difficulty that a law was obtained to restrain the indiscriminate sale of one common poison; and even now it is a rare thing to procure conviction from a jury for the infringement of that law. In Paris, punishment is summarily executed upon those who venture to sell poisons of any kind, without proper authority, and upon those also, who, as vendors of poisons, do not keep them safely under lock and key.

In England the government realize a very considerable sum of money from the sale of stamps upon patent medicines. In France the Tribunals inflict heavy fines upon those persons who sell, or treat disease with secret remedies.

It is not hard to say on which side is the greater share of wisdom—that in which the liberty is accorded to poison or be poisoned according to individual fancy—in which disease is virtually looked upon by the legislature as an occurrence to be made the most of in a

It would seem that in England it is a matter of insuperable difficulty to trace the limits by which, in medical affairs,

pecuniary point of view by any means whatever—or, that which defends the helpless from the tricks of unprincipled men, and which in all medical questions looks upon the *salus populi* as being truly the *suprema lex*.

THE authority of Professor Gregory, of the University of Edinburgh, is now publicly cited by operative mesmerists in support of the grossest impositions. At a recent display at Hungerford Hall, the Mesmeric Professor, a M. Lassaigue, asserted, as usual at such exhibitions, that the phenomena to be witnessed were the effects of electricity, in support of which statement he quoted Professor Gregory. In order that all might seem fair and open, certain persons were chosen as jurors; a Mr. Brewster, who was said to be son of Sir D. Brewster, a Mr. Knox, and a Mr. Fleming. A great variety of the usual marvels were performed. We quote one which was calculated more especially to impose upon the audience, and give a colouring to the pretended manifestation of electricity.

“Mdlle. Bernard having taken her seat in the centre of the platform, the *professor* intimated that he should first exhibit the effects of clairvoyance on the mariner's compass. But before throwing the lady into a state of coma, he should call the attention of the jurors closely to the fact, that, before receiving the magnetic influence, she might closely approach that instrument without any effect being discernible.

“Mdlle. Bernard was then led to the table, followed by the jurors, and placed in close contiguity to the compass; but no motion whatever was perceptible. The professor then made a few rapid passes, and in the course of about ten seconds the subject was declared to be in a fit state for the required experiments. The first in order was to lead her up to the table, and by her head being moved from right to left the needle of the compass most obediently followed in the same direction. This

singular fact was attested by the jurors, who had been appointed for the purpose of closely observing the same.”

Notwithstanding all the skill of the performers, however;—

“Upon the jury being questioned as to their opinion upon what they had witnessed. two of them, Mr. Brewster and Mr. Knox, declared that they still had their doubts of the truth of what they had seen, but that they were unable, although using the utmost vigilance, to detect any collusion between the professor and other parties.”

Such must be the result not only of public exhibitions, but also of private performances, when fairly scrutinized by competent judges. These wonderful feats are then displayed in their genuine characters, either of fraud or of common psychical manifestations. Under which category to place the above experiment upon the mariner's compass would not be a very arduous undertaking. Had the parties undergone a strict search it is probable that the discovery of a concealed magnet would have explained the mystery. The lecturer, however, and the greater part of the audience, appeared to be perfectly satisfied with the performances and the results.

Reviews.

A Dictionary of Practical Medicine.
By JAMES COPLAND, M.D., F.R.S., &c., &c. Part XV., being Part VI. of Vol. III. Longmans. 1851.

THE preceding part of this great work, extending to the letter S, appeared in 1849, and in that now before us we have a series of articles under the same letter, ending with “Spinal Column,” which is not brought to a completion. There remain, therefore, the subjects to be treated under more than the additional seven letters. As some of these, however, will not occupy so much space as many of their predecessors, we shall not hold out so gloomy a prospect as that of multiplying the last interval exactly by seven. We hold the author of so vast and

laborious an undertaking in too great respect to be able to doubt for one moment his anxiety to complete, without loss of time, his contract with the medical public; but in urging the anxious expectations of the early subscribers to his Dictionary, we cannot forget that the author has found time for the publication of a monograph on Apoplexy, in the interval that has elapsed since the appearance of the preceding part of his Dictionary. At the same time, we must remind our readers that the value of the work would inevitably suffer from precipitancy in completion.

Part VI., contains the conclusion of scirrhus and other tumours; scrofula and tubercles; scurvy; serous and synovial membranes; shock, vital or nervous; skin; sleep and sleeplessness; small-pox; softening of structure; spasm; spinal column.

The article *Scirrhus Tumours*, presents the latest researches of Lebert, Bennett, and Walshe. *Scrofula and Tubercle*, occupy thirty-seven pages, and, as may be supposed, must have suffered considerable condensation to convey a fair abstract, within that space, of all that has been written thereon, worth reading. When we quote from the appended bibliography, the names of W. Addison, Hughes Bennett, Glover, B. Phillips, T. Addison, Barthez, Rilliet, Lebert, Scherer, Tyler Smith, &c., &c., we think our readers will be satisfied that Dr Copland has embodied the results of the labours of the latest investigators; and when these are added to a very long catalogue beginning with Hippocrates, some faint idea may be formed of the immense amount of mere reading or reference that Dr. Copland must have performed in the composition of each article. We would not stop here,—each article is justly entitled to the character of an original essay.

The consideration of *Scurvy* extends over sixteen of these closely printed pages, with a bibliography covering more than one page. Diseases of the *skin* engage attention through eleven pages; *Small-pox*, in thirty-one; *Spinal Column*, so far as it is contained in this part, eleven pages. The remaining articles are also each treated at considerable length.

It would be a superfluous compliment to the author to offer our opinion upon

the manner in which each subject is handled. We may, however, remark that the utility displayed in the articles contained in this part increases our desire for the completion of the work.

A Naturalist's Sojourn in Jamaica. By P. H. Gosse, A.L.S., &c., assisted by RICHARD HILL, Esq. 8vo. pp. 508, with coloured illustrations. London: Longmans. 1851.

ALTHOUGH not exclusively addressed to the medical profession, there is much in this book which concerns one important branch of science, akin to medicine, namely, natural history. There is a freshness as well as vigour in the style of the author, which show that he is not merely writing from actual observation, but with a strong enthusiasm in favour of his subject. Natural history, as it is here treated, is not mere *necrology*—the dry bones of science, but a living and animated picture of the habits and instincts of the animals described.

We remember a story of a prodigy of a school-boy, who, when asked by his uncle "What is natural history?" defined it under the words, "Keeping rabbits." Mr. Gosse shows, in an equally ridiculous light, that the science as it is viewed by many collectors and students is a science of dead things—of dry skins furred or feathered, blackened, shrivelled, and stuffed with hay. The scales, plates, and feathers of the animals are accurately counted, the shrivelled and stiffened forms are copied,—the limbs, members, and organs are measured, and the results are minutely recorded in thousandths of an inch. The author has studiously avoided this dull, mechanical, and uninteresting mode of dealing with created things; and in his diary, he makes us acquainted with the habits and uses of the animals which come before him, with occasional botanical notices of tropical plants.

The style of the author reminds us of that of White of Selborne, and Mr. Gosse's book very much resembles the well-known and deservedly popular work of that author. We can recommend it as an entertaining and instructive volume, not merely to those who make a special pursuit of natural history, but to professional readers generally.

The Spine: its Curvatures and other Diseases, their Symptoms, Treatment and Cure; to which are added some Remarks on Paralysis. By CHARLES VERRAL, M.R.C.S., Surgeon to the Hospital for the Cure of Distortions, Portland Road, Regents' Park; &c 8vo. pp. 234. London: Churchill. 1851.

THE suggestions of the author of this treatise with regard to therapeutic measures are stamped with some evidence of independent observation, and of honest study of the plans of other writers. Mr. Verral is chiefly known to the profession as the advocate of the "prone" method of treating spinal disease. He does not, however, confine himself to the exclusive use of any one *plan*, but avails himself of all, according to the peculiarities of individual cases. The recumbent posture, muscular exercise, mechanical support, friction, &c., are all and each in turn laid under contribution to remedy that state of muscular debility that originates in and attends spinal deformity. Among the mechanical means of support employed by Mr. Verral, we may point particularly to the apparatus that he has himself contrived for the treatment of these diseases.

Proceedings of Societies.

MEDICAL SOCIETY OF LONDON.

October 18th, 1851.

Dr. E. W. MURPHY, PRESIDENT.

Aural Polypus Forceps.

Mr. HARVEY exhibited a new polypus forceps, for removing the disease, when of the "gelatinous" variety, from the external auditory meatus. The instrument resembled in principle Assellini's artery forceps, but was provided at the bite with a pair of sharp interlocking teeth, while one leg was prolonged and fitted to a handle measuring about 3 inches. Mr. Harvey had found the forceps very useful for applying the steady traction requisite to prevent the fracture of the polypus, and the disagreeable consequences which might result therefrom.

Therapeutic Properties of Créasote in the Treatment of Diarrhœa.

A communication on this subject was read

by Mr. B. W. RICHARDSON. As we shall shortly present this paper in full to our readers, we do not consider it necessary to give in this place an abstract of it.

The next paper of importance submitted to the society was by Mr. DENDY—

On the Affinities and Prophylaxis of Variola.

The author first called the attention of the members to the obscurity in which the origin of the disease has been so long veiled, and then alluded to a sermon, preached in 1722, to prove that the devil, when he smote Job with sore boils, was the first variolous inoculator. In the present day, even, after innumerable discussions, there is still an extreme discrepancy of opinion regarding the varieties of pock, as well as the nature, degree, limitation, and value of prophylaxis. The question as to the nature of variola and its affinities is intimately connected with that of prophylaxis; for, if it were proved that the several species of pock are but varieties of the same genus, the subject of vaccine influence would be extremely simple—the substitution of a simple for a severe form of malady. But supposing an original identity, there arises the question, by what influence or transmission has vaccinia lost its epidemic character, while it retains its prophylaxis,—varicella retaining the former and losing the latter; while the most modified variola retains both, although shorn of its secondary fever? Varicella, from the absence of prophylaxis, is not a disease of much importance, nor does it belong to the category included in the paper. Bartlett carefully varicellated seven children not previously protected, but failed to produce any effect. Bateman and Bayer, however, had a different belief. In its most confluent form, however, varicella has never been known to produce variola, nor has the latter disease ever been noticed during the prevalence of epidemic varicella; and even if inoculation be practised during its prevalence, the varicella will proceed unchanged; whereas the synchronous insertion of variolous and vaccine matters mutually influence each other to a certain extent. The succession of crops of varicellous vesicles, and their purely vesicular and unilocular character, even when confluent or very deeply seated, mark its dissimilarity. The varioloid disease is, however, of much greater importance. This, Mr. Dendy said, is the diminutive of variola; their essence is the same; and he therefore calls it variella; for, although its vesicle may dwindle in its birth, or pass at once, about the 7th or 9th day, to the crust, yet if its pus or lymph in extreme attenuation be used to inoculate with, sooner or later the true

variola pustule will be produced. The following is his classification:—

Variola—Small-pox.

Variola papularis—Horn-pock.

Inoculated variola—In a previously vaccinated person.

Variella—Casual variola in a previously vaccinated person.

Vaccinia—Cow-pock.

Vaccinia spuria—The pustule of grease or udder sores, or heterogeneous or foul matter, often attended by bullæ, rupia, or erysipelas.

Vaccinella—Imperfect, or abortive vaccine.

Varicella { Lenticular, chiefly in children.
Conoid, swine-pock.
Globosa—hives—the closest affinity to variola in form, as it has a partial disc; but none of these produce full variola by inoculation.

To be capable of transmission and prophylaxis, the pock must be circular, umbilicated, and cellular, having a hard base, and containing lymph. If such be not the case, even during the crusting of the false vaccine, not only variola but variella may impart the modified form of eruption. Mr. Dendy next examined the degree of affinity between variola and the disease which he calls variella, the nature of grease, and the various udder sores, and then proceeded to examine the question as to the controlling influence of vaccinia over variola. Of this, he asserted, there could be no doubt; but he considered the statement made by Jenner and Aikin, that vaccination was a perfect preservative from small-pox, was the foundation of the prejudice against it. It has been disproved by Mr. Estlin, who has seen a fatal case of small-pox, the sufferer having been vaccinated by Jenner himself. Mr. Marson also has said that several persons operated on by Jenner have been admitted since into the Small-pox Hospital. Nevertheless, the mortality from small-pox, amounting formerly, in the British isles, to 40,000 annually—one-tenth of the total obituary—has been so greatly abated in consequence of vaccination and the diminution of variolous foci, that the author indulged a hope that the disease may be ultimately annihilated. Variella may, perhaps, occur in 5 cases out of 100, giving a prophylaxis of 95 per cent.; the disease also, when it occurs, being much milder than inoculated small-pox without vaccination. The mortality of this modified disorder, as recorded by Thompson, was about 3 in 71; by Dr. Gregory's report about 6 or 7 per cent.: while of 1300 unprotected persons 500 died of variola. Mr. Grove, of Wandsworth, states that, during the six months, from September to last March, there were 126 cases of small-pox in that parish, of whom 66 had been vacci-

nated, 1 had had small-pox, and 58 were unprotected. Of the 66 none died, and all had the disease mildly; of those nonvaccinated 16 died; a large number had the distemper in its worst and most perilous form, and several will be disfigured for life. Mr. Waddington, of Margate, adds confirmatory evidence. Small-pox was epidemic in Margate twenty-five years ago: 33 children died, not one of whom had been vaccinated. Mr. Dendy next alluded to cases which were totally insusceptible of the vaccine virus, which he contrasted with those which manifested extreme susceptibility. He remarked that it is essential that the vaccine bud or germ have a congenial soil, uncontaminated by another poison, which, like a weed, might choke its healthy growth. Even during the prevalence of specific malaria, children—though the disease be not actually developed—are rendered especially insusceptible of vaccination. In asthenic, strumous, or cachectic systems, the vesicle will be blighted early, or it will burst out into excess or depravity of action, somewhat like the double or monster blossom. It becomes a disease more resembling grease or udder-sores, and its prophylaxis, of course, fails. Hence the advantage of a preparation of the system; for it is in these depraved diatheses that variola so often becomes confluent, malignant, and bloody, or terminates fatally, even before the eruption would have appeared. The natural predisposition to infection is effected by a change in the crisis of the fluids. According to the acuteness or intensity of the agents that effect this in the system will be also the degree or extent of elaboration of the system. In the mild form of vaccine, this depuration is effected by the mere efflorescence of an areolated vesicle, the visible sign of the constitutional influence. In the severer variola, the process of elimination is multiform—diarrhœa, hæmaturia, cellular œdema and effusion, and induration and suppuration of glands, the more malignant form being attended by the bullæ of pemphigus, terminating in ragged ulcers, or deep abscess under the crust. Modified variola or variella is not a mule, as it is reproductive, and may be communicated like perfect variola, both by malaria and by inoculation. It may also induce the specific fever, without eruption, in children and in nurses, who are protected in a higher degree. Its inoculation for the fourth or fifth time, the author believed, would produce full variola, marked by true variolous symptoms, and he thought it might do so at once. In several isolated cases, in which some years ago he practised its inoculation, there were both the secondary and tertiary fevers, the first a slight erythema on the third or fourth day prior

to the general eruption, and the other on the maturation of the pustule. When occurring casually, the first eruption of variella is on the hands, of variola usually on the face and breast. An argument against the identity of variola and vaccinia will be found in their running a parallel course, or in the one overcoming the other, variola being generally the victor when inoculated simultaneously. This draws attention to the question of incubation or latency of a germ. The poisonous atom will sometimes lie in the system for months and years. Rabies has occurred fourteen months after infection; syphilis may produce secondary or tertiary symptoms years after primary disease has subsided. The incubation of variola may be, therefore, somewhat undefined; nevertheless, from experiments, a fair conclusion may be formed as to the usual period of this incubation, when vaccine prophylaxis may be induced; and from these the author judged, that, if on the third day, before the onset of erythema, rigor, and headache, perfect lymph be inserted, prophylaxis is almost certain, assuming three or four days for the premonitory symptoms before the variolous point or papula appears. The vaccine vesicle will then be eight or nine days old, the areola will be becoming indurated, and erythema will exist. It is probable, Mr. Dendy said, that in this fever against fever the essence of prophylaxis really exists. If under this influence the variolous papula proceeds, it will resemble umbilicated varicella or horn-pock. If the vaccine be used two days later, especially if there be bronchial or pulmonary symptoms present, it will be useless. The papula may be just apparent, but it will be blighted. There are, of course, exceptions to this rule. A woman was delivered, says Dr. Hennen, while suffering from confluent variola; the infant was vaccinated a few hours after birth. The mother died on the 11th day; the infant had true vaccine, and lived. Eruptive disease is most virulent and perilous in warm climates, and secondary variola is not infrequent there. In the temperate countries, however, the author believes the occurrence of variola to be most rare after complete vaccination, especially if Dr. Bryce's mode has been adopted. His colleague, Mr. George, who has had most extensive experience, has seldom or never seen variella where five or six perfect vesicles have been produced; and he thinks, therefore, that there is no proof of limitation of influence. Mr. Dendy believes, that quality is better than quantity; that one perfect vesicle is preferable to a crop of pale, undefined vesicles. If, therefore, there be two or three perfect vesicles, with annular and indurated areolæ, combined with ery-

thema of two or three days' duration, and followed by spotted or pitted cicatrices, corresponding with the cells of the vesicles, the impregnation and prophylaxis are as complete as from variola against the influence of malaria. Spurious variola, varicella, and variolous horn-pock may, still occur by inoculation. The occurrence of variella from exposure to variolous malaria, in vaccinated children, cannot be above 4 per cent. The inoculated small-pox has seldom been, Mr. Dendy believes, followed by a secondary disorder. The case of Louis XVth is an exception. The cases of secondary variola are marked by extreme severity, especially in adults; the fever will be acute or typhoid, and precede the eruption of variella. The cases of three children were given, one, the youngest unvaccinated, caught small-pox, and died; the second child, well vaccinated two years previously, escaped altogether; and the eldest, who was deeply pitted with small-pox, had a severe secondary attack, and also died. These children all slept in the same bed. The nurse, vaccinated in infancy, had a severe, but soon subsiding attack of variella. Other similar cases were adduced from other authors. From all this, we learn that prophylaxis is not a rule without exceptions, either in its direct or subsequent influence. With respect to the question of limitation of influence, by some it has been referred to an abstract law of time. Copland affirms that vaccination is more prophylactic than variolation for fourteen years; and Dr. Gregory has referred to the extreme rarity of variella or modified variola, until fifteen years after vaccination was generally adopted. Mr. Dendy believes that the first opinion may be extended throughout the life. He is of opinion that there is no law of limitation. That some occult change has been effected either in the vascular, nervous, or glandular system, is certain, whether we adopt the chemical, animal, or fungoid pathology. A sporule of a fungus may be sown or planted in the cutaneous tissue, as a vegetable seed in the earth, or rather as a bud is grafted beneath the bark. The cotyledon may thus be unfolded, and the developed germ is thrown up to the surface of the soil, terrestrial or cutaneous, and is there displayed, either as a flower or as a pock, in all its characteristic forms and colours. If the germ be diseased, or if the soil be uncongenial or infertile, an imperfect efflorescence will ensue; a blighted or a bloated flower will be displayed. The soil may be naturally infertile, or it may be impoverished by overstimulation, as in the area within the circle of the ring-worm, or of those vegetable eccentricities termed "the fairy ring;" both being the result of fungoid sporule spreading in a circle. To complete the analogy,

the virus has poisoned the blood and thrown out its flower on the surface. It has thus done its duty, and the system is thus both protected and depurated. The existence of the sporules was sought to be ascertained in crusts obtained from Mr. Marson, of the Small-pox Hospital. Mr. Dendy, in conjunction with Mr. Grove, of Wandsworth, dissolved them in liquor potassæ, after which black points, which were considered to be the sporules, could be distinctly seen. The notion of a law of limitation is not conclusive. Some concurrent or casual causes may still be the explanation of secondary diseases. A want of balance between the antagonising influences certainly exists; a concentrated, intense, or virulent form of epidemic may overwhelm or saturate a system that would have resisted successfully a milder influence; or a system reduced by disorder, or any other depressing cause, would yield to an attack of disease which in a healthy state might have passed by unheeded. The proof of successful vaccination is not hypothetical; it is displayed in the perfect vesicle and the constitutional excitement. If these requisites be fulfilled, the author believes we shall have little need to re-vaccinate, or to discuss further the vague question of limitation.

Mr. HUNT read a paper on
The Skin as a Diagnostic of the General Health.

The author commenced by observing that the subject naturally divided itself into two parts, viz.:—1. The indications presented by the healthy skin. 2. Those presented by the skin in a state of disease.

Having alluded cursorily to the former, by pointing out some of the indications presented by changes in the condition of the skin as to smoothness or roughness, moisture or dryness, temperature and colour, Mr. Hunt proceeded to discuss the constitutional indications presented by the diseased skin, confining his remarks to a single topic, viz., the rapidity or slowness of development, which characterized respectively the various orders of cutaneous diseases, as arranged by Dr. Willan. To explain this point more fully and forcibly, he placed the first seven orders of Willan in a new rotation, selecting two diseases as types of each order, by way of illustrating the subject, as follows:—

| Orders. | Types. |
|----------------|---------------|
| 1. Exanthemata | { Urticaria. |
| | { Erythema. |
| 2. Bullæ | { Erysipelas. |
| | { Pompholyx. |
| 3. Vesiculæ | { Eczema. |
| | { Herpes. |
| . Pustulæ | { Ecthyma. |
| | { Impetigo. |

| | |
|--------------|---------------|
| 5. Papulæ | { Lichen. |
| | { Prurigo. |
| 6. Squamæ | { Lepra. |
| | { Pityriasis. |
| 7. Tubercula | { Acne. |
| | { Lupus. |

The first three of these orders, viz., *Exanthemata*, *Bullæ*, and *Vesiculæ*, were described as comprising for the most part diseases of rapid evolution or development; the last three, viz., *Papulæ*, *Squamæ*, and *Tubercula*, as containing diseases of slow development; the order *Pustulæ* taking an intermediate position in this respect. On this basis the author proposed to establish a theory, for the support of which he produced many curious facts relating to the artificial production of the various forms of skin disease, as well as facts connected with the development of spontaneous eruptions.

The theory consisted in regarding eruptions as defensive efforts of nature, tending either to prevent the absorption of poisons, or to eliminate them when absorbed; those poisons or injurious agents which are most actively mischievous, being most rapidly eliminated or repelled: exciting the blush (*Exanthema*), the blister (*Bulla*), or the vesicle (*Vesicula*), those which are less rapidly destructive exerting a slow and feeble effort at elimination, as observable in the pimple (*Papula*), the scales (*Squama*), or the tubercle (*Tuberculum*); while those poisons which are of intermediate intensity of action originate the pustular form of eruption.

Taking seven diseases as so many types of these orders respectively, the author observed that their average duration when unchecked by treatment, was strikingly illustrative of the truth of this theory of development. Thus—

| | |
|------------|-------------------------------------|
| Urticaria | continues usually a few hours only. |
| Erysipelas | a few days. |
| Herpes | twice as long. |
| Ecthyma | a few weeks. |
| Lichen | as many months. |
| Lepra | as many years. |
| Lupus | for the whole life. |

Each eruption shewing the relative degree of intolerance of the poison manifested by the system, and thus becoming a signal of danger. Mr. Hunt contended that if this theory prove to be true, it might throw some light on the *prognosis*, the *pathology*, and the *therapeutics* of cutaneous disease; assisting the prognosis by determining how long the disease might be expected to last; the pathology, by pointing out the sudden cause of the disease, and its relative activity or destructive power; the therapeutics, by suggesting long perseverance in

one judicious plan of treatment in the diseases at the bottom of the list, and by indicating some error of treatment when the cure of those at the opposite end of the chain does not proceed at a rate corresponding with their natural rapidity of development.

These positions were illustrated by allusions to the action of external agents in the production of various eruptions, as well as to internal sources of cutaneous disease; and among other important facts it was stated that, while the diseases included in the first four or five orders were producible by external agents, with a readiness diminishing from above downwards, it was impossible to establish the eruptions at the bottom of the list, (Lupus, Acne, Lepra, Psoriasis, &c.,) by any external application whatever.

The author concluded by remarking, that amidst the general obscurity in which cutaneous pathology was involved, it was sometimes a relief to follow a faint and feeble light, in the hope of its leading to further discoveries; and that this was the highest character he claimed for the observations to which the Fellows had so kindly listened on the present occasion.

ACADEMY OF MEDICINE, PARIS.

Oct. 7th and 14th, 1851.

The Influence of Pregnancy, the Puerperal State, and Lactation—upon the Development and Progress of Phthisis.

M. GRISOLLE read, in his own name, and those of MM. Louis and Bricheateau, a report on a work by Dr. Dubreuilh, of Bordeaux. M. Grisolle observed that he had, in 1849, presented a work which went to prove that pregnancy, so far from arresting the march of phthisis, tended to its precipitation; that labour and the puerperal state do not hasten the fatal termination, but prolong it, provided that the disease is not already far advanced. Dr. Dubreuilh's memoir furnished additional evidence in support of these opinions. In the thirteen observations collected by M. Dubreuilh, phthisis had been declared during the three first months of gestation. Four women had been in good health at the time of conception, whilst eight others had presented more or less definite symptoms of disease for a long time before. Contrary to what would have been looked for on the ordinary view of these cases, the symptoms of phthisis, instead of improving, became more confirmed. In no case was the alleged suspensive power of pregnancy

upon phthisis observed; on the contrary, it seemed always to perform the part of aggravating that malady. According to M. Grisolle, the cases are more common where the first signs of phthisis coincide with the commencement of gestation, than where pregnancy follows on the first symptoms of disease. Women in whom the development of phthisis is decided are less disposed to become pregnant. M. Dubreuilh had made the same observations. M. Delafond had also noted a similar fact in animals. Pregnancy does not modify the character of the phthisical disease. M. Dubreuilh states the opinion—in which, however, M. Grisolle does not concur—that in the last week of gestation pregnancy interrupts the progress of disease. Exceptional cases only are admitted by M. Grisolle. It is rarely, he remarks, that phthisis, complicated with pregnancy, offers those remissions or suspensions which occur in ordinary phthisis.

M. Dubreuilh has arrived at the conclusion that parturition and the puerperal state precipitate the termination of phthisis to a greater extent than is allowed by M. Grisolle, who asserts that, except where the disease is far advanced, an actual suspension of phthisis may follow on parturition.

Dr. DUBREUILH has observed that parturition is generally easy in phthisical patients; at the same time he states that lactation is attended with injury both to mother and child in the phthisical patient.

New Instrument for remedying Malpositions of the Uterus.

Dr. ALEXIS FAVROT submitted an ingenious contrivance, which consisted of an empty bladder, to be introduced into the rectum, and when there to be distended with air from another bladder, connected externally by a tube and stopcock to the former. By gradually filling the bladder in the rectum, the displacement, especially retroversion, is restored effectually, and without pain.

Oct. 14th.

Substitution of Iodated Oil for Cod-liver Oil.

M. CHAMPOUILLON gave the following results of his experiments:—

102 phthisical patients were treated with cod-liver oil. Of these, 51 were in the first stage; of which 21 were cured: 37 were in the second stage; of which 9 were cured; 3 died: 14 were in the third stage; of these, 6 were cured; 4 died.

75 other phthisical cases were treated with iodated oil. In none of these did any amelioration take place: in many the disease was aggravated.

The Mechanism of Intestinal Strangulation by Diverticula.

M. MALGAIGNE read a report on an essay by M. Parise, in which the author treated of the strangulation formed by a diverticulum having become twisted around one or more folds of the intestines. M. Parise pointed out two forms of this accident,—one in which a single fold of a diverticulum causes strangulation through its extremity becoming distended by gases, and thereby preventing its liberation. The second variety consisted in a double fold of a diverticulum around the intestine.

The appendices being situated at the lower part of the ileum, the author observed that these strangulations are generally to be found in the right iliac region. With regard to treatment, the author suggested the puncturing the end of the diverticulum as a means of relaxing the constriction after the performance of gastrotomy.

Anæmia treated by Transfusion of Blood.

M. MONNERET related a case of anæmia occurring in a young woman, twenty-eight years of age, in whom the diseased condition had arrived at its worst. The debility was extreme; the decolouration of every part complete; and all the usual signs of a disordered circulation aggravated in the highest degree. Tonics and full diet were useless. The symptoms became worse and worse; syncope, vomiting, agitation; pulse imperceptible; incessant urgent thirst, &c. &c. In short, the patient resembled a corpse, and death seemed imminent.

M. Monneret very slowly injected about three pints of defibrinated blood,—i. e., the serosity and globules. The pulse rapidly rose, and became full. In about ten hours afterwards, however, the improvement vanished, and the patient sank rapidly.

M. Monneret proceeded to consider the question, whether the patient's rapid death was owing to the disease or to the transfusion. M. Monneret attributed the result to the progress of the anæmia; at the same time he observed that it must not be forgotten that the fluid injected was very different from living blood; that it was, in fact, the *cadaver* of normal blood: the foreign blood having but little relation to the vessels into which it was forced.

communicated a statement of their researches upon the nervous system. The first part, now submitted, relates to the action of the cervical portion of the sympathetic nerve and of a part of the spinal cord on the dilatation of the pupil.

M. Waller had observed, a long time since, that, when a nerve is divided, the distant portion becomes disorganised, so that the change may be detected by the microscope, while the central portion retains its normal state during a considerable period. Extending the same method of experiment and examination to the sympathetic nerve, the author had found that the nervous centre of the cervical sympathetic cord was in some part below the second ganglion, that the direction of the cord is from below upwards. The division of the sympathetic cord in the rabbit (in which animal it is a simple cord), the lower portion was always found to have preserved its integrity, while the upper portion was disorganised. As the upper portion of the divided nerves preserve with their normal structure the same endowments as at the time of their division, the authors have galvanised the inferior part of the cervical sympathetic nerve without exciting any pain. The same experiment performed on the recently-divided nerve had shown that the strongest mechanical or galvanic irritation had failed to produce the slightest impression. The experiments of Müller and other physiologists have proved that the ganglia do not arrest the sensitive impressions; it remained only to recognise the purely motor or nutritive function: this has been done by the following experiments:—

Scarcely had a few revolutions of the machine been made, than already an enormous dilatation of the pupil on the same side took place, giving irrefragable evidence of the function of the motor functions of the sympathetic cord of the sympathetic. This result, so remarkable, of galvanising either the separated sympathetic trunk in the rabbit, or the re-united trunk of the pneumogastric and sympathetic in the dog, cat, &c., is as invariable as contractions of the limb from irritation of the sciatic nerve. At the same time that this experiment discovers the motor endowment of the sympathetic in the neck, it explains, also, the cause of the contraction of the pupil, after the section of the nerve, shown first by Petit in 1712, and which has remained until now a barren fact in physiology; for it is evident that, since irritation of this nerve produces contraction of the pupil, the contraction after section of the nerve can only be the result of paralysis of the dilator muscle of the pupil, in the same manner that paralysis of the extensors of

ACADEMY OF SCIENCES, PARIS.

Oct. 6, 1851.

Influence of the Sympathetic Nerves and Spinal Cord upon the Dilatation of the Pupil.

M. JULIUS BUDGE, professor in the University of Bonn, and M. AUGUSTE WALLER,

the hand leave the hand closed by contraction of the flexors.

For additional evidence it suffices to galvanise the third pair in the rabbit during life, or immediately after death. By this means the contraction of the pupil is obtained. In thus galvanising the sympathetic and the third pair, the alternate constriction and dilatation of the pupil may be obtained as surely as by the action of physical agents.

In acting upon these two nerves, MM. Budge and Waller have always had occasion to remark that the action of galvanism on the former always produces a gradual and continued expansion of the pupil, which occupies some moments in attaining its maximum, like most nerves placed under the influence of the sympathetic, while the return to the original state after the cessation of the dilatation is equally slow. The irritability of this nerve is preserved a long time after death. With the third pair, on the contrary, they have seen that the contraction is almost instantaneous, that the return to the former state is equally sudden, and that this nerve loses its irritability after it has been frequently excited, and that after death this property is rapidly lost.

In order to reach the source of the motor power of the sympathetic, the authors had galvanised the nerve in the rabbit without dividing it, merely isolating it from its connections. On the first ganglion, and on the entire cord, to the last cervical ganglion, dilatation of the pupil is produced. No result followed the galvanisation of the ganglia or cord below this point.

To ascend still higher, the spinal cord in a rabbit was denuded from the inferior portion of the dorsal region to the upper part of the neck. On galvanising the middle of the exposed portion, dilatation of the pupil was rapidly produced. The part of the spinal cord possessing this property was that inclosed between the first cervical and the sixth dorsal vertebræ, and which they have designated the *cilio-spinal* centre.

The maximum effect is observed about the second and third dorsal vertebræ. When the two cervical sympathetics are intact, galvanisation of the *cilio-spinal* centre influences both eyes; but when one of these is divided, dilatation does not take place on that side from galvanisation of the centre. When both sympathetics are divided in the neck, the pupils of both eyes remain undilated. When the spinal cord remains entire, galvanisation of one side only produces dilatation equally in both eyes. If the spinal cord be divided longitudinally, and the two halves be separated by pieces of glass, irritation of one side affects only the corresponding eye. If the

cilio-spinal centre be removed in its totality, and the poles of the battery be applied to various parts of the dura mater of the spinal canal, the power of dilating the pupil is found to be situated only at the junction of the second and third dorsal vertebræ.

Those causes which diminish muscular irritability after death diminish the power of the *cilio-spinal* centre over the pupils. *Cæteris paribus*, irritation of the spinal marrow produces effect only immediately after death. After death the power over the eye is lost successively from the extremities to the centre of the *cilio-spinal* region.

As a sequel to these researches, the authors propose to examine the influence of the intra-cranial portions of the sympathetic and of the fifth pair of nerves upon the movements of the iris.

SURGICAL SOCIETY OF PARIS.

Oct. 17, 1851.

The Treatment of Spinal Curvatures and Thoracic Deformity produced by Disease of the Pleura and Lungs.

M. DEBOUT read a report on a work by M. Pravaz, in which the author stated successful results, in these deformities, from the employment of compressed air baths, conjoined with special gymnastics. Several plaster casts were exhibited in illustration. The reporter proposed that the work by M. Pravaez be deposited in the Society's archives, and the author admitted a corresponding member.

M. MASCAREL submitted an essay on *The Etiology of Tetanus*, which the author had traced in several instances to the influence of cold. The same author also related a case of *calculus in the nasal fossa*, the result of an injury which had fractured the bones, and one portion had formed the nucleus of a concretion the size of a pigeon's egg. The calculus had been removed, but was not yet analysed.

M. HUGUIER presented a specimen of *Caries of the Temporal Bone*, which had been followed by disease of the brain and its membranes, causing hernia, cerebri, paralysis, and death.

M. GOSSELIN related the case of a man who had swallowed a tobacco-pipe for a wager; *the pipe had caused great disturbance of the stomach and bowels; it was voided by the rectum*, but in its passage through the alimentary canal it had caused inflammation and ulceration to such an ex-

tent, that *the patient died five days afterwards.*

EPIDEMIOLOGICAL SOCIETY.

Session 1851-52.

We understand that the several Committees of this Society, appointed to investigate specially subjects of important general and scientific interest—such as “The facts connected with small-pox and vaccination,” “The condition of common lodging houses,” “Epidemic diseases occurring in hospitals,” &c. &c.—are assiduously engaged in the prosecution of the inquiries assigned to them.

The new field of special investigation entered upon by the Epidemiological Society is rich and extensive; and, in order that a corresponding harvest of important results may be gathered in, it is only necessary that the Society should receive the countenance and support of the professional and general public.

The first ordinary meeting of the session will be opened by an address from Dr. Babington.

The following are the dates of the ordinary meetings of the Epidemiological Society. Half-past eight precisely:—1851—Monday, Nov. 3d, Dec. 1st. 1852—Monday, Jan. 5th, Feb. 2d, March 1st, April 5th, May 3d, June 7th, July 5th, August 2d. The meetings will be held at the house of the Royal Medical and Chirurgical Society, 53, Berners Street.

Correspondence.

CORRESPONDENCE BETWEEN DR. MURPHY, MR. COOPER, AND DR. RANKING, RELATIVE TO THE NORWICH CONSULTATION.

[We have received for publication from Dr. E. W. Murphy, Professor of Midwifery in University College, the subjoined correspondence, in reference to a case in which he was lately consulted.]

IN consequence of some misrepresentations that have been in circulation, respecting an opinion that I had given on a case at Norwich, I have been obliged in my address to the Medical Society of London to allude to it, and to refer to my correspondence on the subject in support of my statements. A sense of duty, therefore, obliges me (although reluctantly), to publish that correspondence, which I now do without

any further comment than is necessary to render it intelligible.

May 1st, 1851, I received a message by electric telegraph from Dr. Bell of Norwich, to see with him the case referred to. Having consulted with him on the best course to adopt, I gave him, at his request, a certificate stating the nature of the disease, its cause, as I supposed, and my opinion of the treatment as related to me. Soon after my return to London I received the following letter from Mr. Cooper, which instituted the subsequent correspondence.

No. I.

College Street, Norwich,
May 2, 1851.

Sir,—You were, if I mistake not, summoned to Norwich yesterday by a homœopathic practitioner in this city to visit Mrs. G., who has been a patient of mine for some years, whom I attended in her last labour about six months ago, which was accomplished in every way naturally and satisfactorily, and from which she recovered without an untoward symptom, her convalescence being more rapid than usual. She has now aborted at about the third month, and has expelled portions of a placenta with numerous hydatids.

Will you have the courtesy to inform me if the subjoined certificate is a correct copy of one you gave as your undoubted opinion of her case, and its treatment. Waiting your immediate reply, which I shall esteem a favour.

I remain, &c., &c.,

W. COOPER.

Copy of Certificate.

I believe that Mrs. G. has suffered from extreme and long-continued hæmorrhage, the result of an hydatid degeneration of the placenta. It seems to me highly probable that it may have arisen from a portion of the placenta retained after Mrs. G.'s previous labour, which became thus disorganised. The treatment that has been adopted was judicious, nor do I think that anything has been omitted that was necessary for her safety. The great danger of such cases is the difficulty of detaching the morbid mass from the uterus, as the hæmorrhage that continues during the separation may completely exhaust the patient before it is expelled.

(Signed) EDWARD W. MURPHY.

May 1st, 1851.

12, Henrietta Street, Cavendish Square,
May 3, 1851.

Sir,—In reply to your communication, I beg to say that the copy of my written opinion on Mrs. G.'s case is, to the best of my recollection, correct. I may state that

in the history of her case that I received, I was given to understand that it had been necessary in Mrs. G.'s previous confinement to remove the placenta. I mention this as it does not correspond with your statement "that Mrs. G.'s last labour was accomplished in every way naturally and satisfactorily."

I remain, dear sir,

Yours, &c.,
EDWARD W. MURPHY.

No. II.

College Street, Norwich, May 5, 1851.

Dear Sir,—After your acknowledgment of the opinion given in Mrs. G.'s case, in your letter of yesterday, you will not be surprised to hear from me again. Pardon me, if I express my astonishment that you should have grounded your opinion that a portion of placenta had been left in utero in Mrs. G.'s last confinement, upon the statement of Dr. Bell rather than upon your own judgment, from facts elicited from the patient herself, or her friends; and, still further, supposing such had been the case, which I do not for one moment admit, that you should have ventured an opinion that has reflected discredit on the practitioner in attendance at that time.

It is my intention in my present communication to deal merely with the part of your written opinion which speaks of the cause of my patient's present disease. Neither myself, nor any of my professional brethren whom I have consulted, believe your opinion to be based upon a sound principle. I will, however, give you a few further particulars, which you may possibly not have been acquainted with.

Mrs. G. once menstruated in the usual way after her last confinement, which took place six months ago; from which she was sufficiently recovered at the end of a fortnight to be out of bed, attending upon her dying infant.

She supposed herself about four months advanced in pregnancy when attacked by her present illness. Since you were consulted by Dr. Bell, a blighted but distinctly recognizable embryo had been expelled from the uterus, and before her present attack the mammæ became flaccid and small. Did not the alteration in the mammæ mark the period when the ovum became blighted?

Do not the above facts disprove the idea of the present hydatidous affection having depended upon a portion of placenta left behind at the previous confinement?

Could she have had a rapid and favourable recovery, have gone into society, have menstruated once in a healthy and natural way, if anything had been left in utero six months ago?

Is pregnancy compatible with a portion of the placenta of the previous labour becoming hydatified?

Do not hydatids more frequently originate in a blighted ovum, and very rarely, if ever, form in an unimpregnated state?

As my professional reputation is somewhat at stake, you will not, I am sure, hesitate to weigh these questions, and favour me with an answer, even if it be to the subversion of your former opinion.

I am, sir, yours obediently,
W. COOPER.

To E. W. Murphy, Esq., M.D.

12, Henrietta Street, Cavendish Square,
May 7, 1851.

Dear Sir,—In reply to your note, I beg to assure you that nothing was farther from my intention than to reflect discredit upon the practitioner in attendance upon Mrs. G., in her last confinement. I am sure your knowledge and experience in the practice of midwifery must convince you that it is quite possible that retention of the placenta may take place after delivery so as to require removal, and that an adherent portion may be left behind in the uterus, and yet the practitioner be in no way to blame for such a result. I thought it probable such might have happened in Mrs. G.'s case, and that the retained portion became the nucleus of future disease. I trust, therefore, that you will acquit me of any intention to reflect upon you.

With regard to the astonishment you express that I should have grounded my opinion upon the statement of Dr. Bell, I can only say that it is my practice in consultation to receive the history of the case from the gentleman in attendance. You will pardon me if I decline to enter upon a discussion on the other points touched upon in your letter, as, having no personal knowledge of the facts you state, it would lead to no useful result. Dr. Bell might just as readily express astonishment that I should have adopted your statement as you have done with regard to his. I may, however, mention that when I saw her, she was considerably larger than at that period. The fundus was midway between the umbilicus and pubis, and I was informed that it was double that size before the hydatids had been expelled. I have not in my recollection any case of four months' pregnancy in which the uterus was so large, nor do I believe that the disease of the chorion increases so rapidly as to produce such an effect in so short a time. However, this is merely matter of opinion.

In conclusion, I beg you to believe that I had no intention whatever to attach blame to you, nor did I imagine that the

opinion which I had given would be so interpreted.

I remain, dear sir,

Yours very truly,

EDWARD W. MURPHY.

No. III.

Norwich, May 8, 1851.

Dear Sir,—Your letter of this morning appears to me to be anything but a satisfactory solution of your reason for giving the opinion you did with regard to the cause of Mrs. Gladstone's present disease. I am quite sure you must feel that opinion to have been somewhat hastily formed. You speak ambiguously of the uterus being larger at the time of your visit than you could account for, and therefore the only inference I can draw is, that you still adhere to the idea of a portion of the placenta being retained at the previous confinement, and that the hydatid growth was of six months' duration instead of *four*. I feel you must be inclined to doubt the accuracy of the facts I have presented to your notice with regard to the history of this case, or you would not still retain such a notion. Surely it is impossible that the patient should have recovered her confinement so rapidly, have menstruated once regularly, and have conceived again with an hydatid growth of nearly two months in her uterus. Excuse me if I now say a few words on the second part of your opinion on the case as to the judicious treatment pursued by Dr. Bell and his friend.

Yesterday three weeks was the first time the aid of Dr. Bell was sought in this case. Mrs. G. had then upon her a slight uterine discharge, and believed herself threatened with abortion; her symptoms varied but little until Monday, 28th May (April?) when, upon Dr. Bell making an examination per vaginam, she was told she had a polypus of the womb, and must undergo an operation; but on Tuesday he said that it was a false conception, and upon an accession of uterine pains considerable attempts were made at the dilatation of the uterus by means of an instrument, and persevered in without success until the pain could no longer be borne. On Wednesday, Dr. Bell, becoming rather alarmed, sought the assistance of his friend Mr. M'Eoy; it was then perceived that some hydatidous placenta was being expelled, and after many hours of external and internal manipulation, a part of the contents of the uterus, which I believe was submitted to your inspection, and which I have now in my possession, was expelled. Pardon me if I express my belief that you were acquainted only partially with the

treatment of this case, as you could not have justified such an amount of manual interference without any alarming hæmorrhage or exhaustion to warrant it. If there was any amount of hæmorrhage where were the means taken to restrain it? No plug—no cold affusion was used—No! to take the patient's own words, there was no more flooding than she should have had after an ordinary labour. The first examination, made by Dr. Copeman and myself, discovered an os uteri irregularly dilated, tumefied, and ragged. The vagina intensely hot, and painful to the touch; and the patient with a pulse of 180 as near as it could be counted, with a putrid mass still within the uterus. As I feel the tone of both your letters implied a degree of doubt as to the correctness of the history I have given you of this case, and as I dare say it varies some little from that you received from Dr. Bell, I thought it better to substantiate my report by forwarding you Mr. Gladstone's statement. The version of the case given by Dr. Bell, and his treatment of it, would have been passed over in silence by me (notwithstanding the mal animi he has displayed in delighting—as my patient relates—in reverting constantly to the management of the practitioner at the last confinement), had it not been justified by so good an authority as yourself.

I am, sir,

Yours very truly,

W. COOPER.

12, Henrietta Street, Cavendish Square,
May 13, 1851.

Dear Sir,—I regret that my letter has not given you the satisfaction you desired. I beg to repeat that my opinion in Mrs. G.'s case was not hastily formed. I mentioned what the nature of her disease was, the danger which attended it, and what seemed to me, from the history I received, its probable cause. That account is at variance in many points with that which you have sent me, and so far as my opinion was founded upon Mrs. G.'s previous history, its correctness depends upon the accuracy of the account which I received. If the placenta were retained, if it were removed, if an adherent portion were left behind, then it seems to me probable that such was the cause of the complaint. If, on the contrary, no such thing occurred, then, of course, it could not be, and we must endeavour to explain it by supposing that the ovum which entered the uterus after the last menstrual period became diseased, and that this morbid growth was the result, which increased so rapidly as to enlarge the uterus to the size it usually is at six months gestation. Such

may have been the case, and if so I was in error in assigning retention of the placenta as its probable cause. But I am sure you must perceive that, when I give an opinion upon facts of which I have no personal knowledge, I must be guided by the evidence I receive, and it would be an act of great injustice to Dr. Bell to take your statement of these facts, without giving him the opportunity of justifying himself. I am extremely anxious to avoid creating discord among my professional brethren, and consequently I have declined to discuss with you these particulars, neither have I had any communication with Dr. Bell on the subject. So far as my opinion is founded upon previous history, its accuracy depends upon the correctness of that history.

There are, however, some facts that have come under my notice, upon which I can speak. I made an examination of the uterus in Mrs. G.'s case, and I neither found "the os tincæ tumefied and ragged," nor "the vagina hot and painful," nor any "putrid mass in the uterus." The mass was an hydatid chorion, which was not putrid, and part of which had been thrown off. The lady had certainly a very rapid pulse, the pulse of hæmorrhagic exhaustion, and it was most desirable for her safety that the whole should be expelled. Dr. Bell's treatment (*which was not homœopathic*), was entirely directed to that object. You are aware that manual efforts are sometimes made to remove an hydatid mass, knowing that whatever pain may be caused it is fully compensated by the complete arrest of the hæmorrhage. When I saw Mrs. G. the hæmorrhage had ceased, but she was so exhausted, her pulse so rapid, her countenance so bloodless, that it was evident hæmorrhage had been going on for some time. She had just the appearance which this disease always presents, in consequence of the frequently repeated discharges to which it gives rise. I feel, therefore, some difficulty in understanding your assertion that there was no alarming hæmorrhage until the 30th April. With regard to the manual efforts said to be used by Dr. Bell, I do not by any means justify "the exertion of extreme force upon the body from four in the afternoon of that day, till one in the morning of the next," but you will pardon me in expressing any opinion on these points, without having also Dr. Bell's statements of these facts.

I wish at present, that you would consider this communication to be made to you in confidence, as I have not written to Dr. Bell, and am extremely unwilling to do so, because it must have an effect that is extremely injurious among professional

men, nor can I perceive that any useful purpose can be accomplished by it. If, however, you think otherwise, I shall at once communicate with Dr. Bell, and learn from him his explanation of the statement you have forwarded. With regard to the opinion I have given, I see no reason to alter anything that I have said, but merely to explain that in stating a probable cause of the disease, I must be guided by the account I receive, and either of those, yours, or Dr. Bell's, would be sufficient for the purpose.

I remain, dear sir,

Yours truly,

EDWARD W. MURPHY.

[These letters refer to a statement to which I shall presently allude. Mr. Cooper did not wait my reply, but hastened up to London, and I regret that he did not think proper to call upon me, which one would suppose to be a natural course; not doing so is a sufficient proof of the animus that guided him, inasmuch as I have been given to understand that the special object of his visit was to obtain certificates from other professional men to prove that my opinion could not be correct; that it was in fact a pathological blunder. If this be true, it shows Mr. Cooper's desire rather to attack me than to accept any explanation that I could offer him, and will justify the suspicions which the tone of his correspondence excited. After a few days I received the following note:—]

No. IV.

10, Fenchurch Buildings.

Dear Sir,—Your communication of the 12th inst. did not reach me till yesterday, having left Norwich for London on that day. The assertion of Dr. Bell as to the cause of Mrs. G.'s present disease, and your confirmation of its extreme probability, has had so prejudicial an effect on my professional reputation, that *I am induced to bring the matter before the profession generally*. I must, therefore, beg of you to make any communication you may think right with Dr. Bell upon the subject, and consider that all correspondence which you may have the courtesy to hold with me must be done without any confidential reserve.

I am, dear sir,

Yours faithfully,

WILLIAM COOPER.

The letter No. 3 inclosed a statement, which charged Dr. Bell and another gentleman with "having attempted to dilate the womb by means of an instrument," and with having used extreme force upon the body of Mrs. G." This was certified by Mr. Gladstone. Being forwarded to Dr.

Bell, I received from him another statement of a very different kind, in which Dr. Bell's treatment is given in detail, but no mention made of any instrument being used. This was also attested by Mr. Gladstone in the following words:—"The above is what I believe to be a true statement of the case of my beloved wife as it came under my own observation; and I take this opportunity of saying that whatever may be the opinion of any concerning the medical treatment which has been followed by those who have had the case under their care, I feel under the deepest obligation to Dr. Bell for his most disinterested care and kindness; and I take the first opportunity of expressing my belief that, whatever difference of opinion may exist, I have the greatest cause for thankfulness to all the medical gentlemen concerned, whose sincere object has, I believe, been to be instrumental under God in restoring my dear wife to me." The two statements appeared to me contradictory and irreconcilable.

Expecting from Mr. Cooper some public statement of his case, I was surprised to read in the *Lancet*, May 17th, an *anonymous* letter, making an attack upon Dr. Bell and me. This letter was inserted in the leading article, which contained very severe strictures. To this attack I replied, May 31st. My letter called forth others, and among them one from Mr. Gladstone, who had evidently been under a complete misapprehension of my meaning when I stated in that letter that the documents sent to me were "contradictory and irreconcilable." In reply, I forwarded to the *Lancet* copies of the documents, with an explanation; but that journal concluded the correspondence much in the same manner it was commenced. A fragment of the letter I had written in explanation was inserted; but the chief part, and the whole of the documents sent, were omitted, stating that "This correspondence cannot be continued: it has already diverged into questions quite distinct from the object which led to its introduction in our columns. On the questions raised, we believe there cannot be two opinions in the profession.—ED. L."

Notwithstanding this determination, a letter from Dr. Ranking was inserted among the notices from correspondents, Sept. 20, 1851. This led to a renewal of the correspondence, not through the pages of the *Lancet*, but privately. I learned from it many particulars with which I was unacquainted; but being informed of them, I now feel it my duty to place the whole correspondence before the profession.

Dr. Ranking's letter to the *Lancet* was as follows:—

No. V.

Sir,—I am anxious, by the help of your pages, to inquire of Dr. Murphy whether he still adheres to the opinion expressed in his certificate, given in a late unfortunate case, that a portion of placenta remaining in utero after a labour is capable of undergoing hydatid degeneration?

I hope Dr. Murphy will excuse my asking him this question, as I am now preparing a report on midwifery for the next volume of the "Half-Yearly Abstract," and am unwilling to give further publicity to an opinion so opposed to that of all eminent obstetric authorities as emanating from a lecturer on midwifery, without first ascertaining that such are Dr. Murphy's real sentiments.

I am, sir,

Your obedient servant,
W. H. RANKING.

12, Henrietta Street, Cavendish Square,
Sept. 25, 1851.

Dear Sir,—Having been absent from London, I did not see your letter to the *Lancet* until some days after its publication. That journal had professed some time since to close the correspondence on "the Norwich Consultation;" and I shall not reopen it by replying, through its pages, to you. Nevertheless, as my silence might be erroneously interpreted, I send you these few lines to correct what seems to me a misapprehension on your part.

The question to decide is not precisely as you have put it—viz., "Whether a portion of placenta remaining in utero after labour is capable of *undergoing* hydatid degeneration?"—but whether a placenta, *having before labour undergone* that change, and being in consequence morbidly adherent to the uterus, is capable, after delivery, of continuing the disease in the portion retained? I do not perceive any impossibility in this, although I am quite aware that a retained portion of a placenta otherwise healthy could not do so. The cases of this disease are so scattered, and their histories so imperfectly related, that it is difficult to quote a case in illustration; but that such a cause of hydatids had been ascertained, I infer from the fact that Denman, Burns, and other writers of practical experience, have mentioned a retained portion of placenta as one of the causes of hydatids. Such an opinion is not, therefore, so opposed to that of "all eminent obstetrical authorities," as you imagine.

In applying these observations to the case upon which I was called upon to give an opinion, from the history of the case which was given me, and the great size of uterus, it appeared to me that it was *probable* that a retained portion of a previously

hydatid placenta, which it was impossible completely to remove, caused the subsequent symptoms. In stating a probable cause it was not intended to exclude other possible causes; the opinion that I formed rested on the facts placed before me. So far, then, as the general question is concerned, "my real sentiments" are,—

1st.—That it is possible that a child may be born at the full term and yet the placenta undergo hydatiform degeneration.

2nd.—That such placenta can seldom be completely removed.

3rd.—That it is probable the retained portion may continue the disease.

4th.—That the usual course of hydatid degeneration being the destruction of the ovum before it attains maturity, abortion is generally the result.

I am sure you must perceive that with such sentiments my stated opinion could not bear the interpretation given to it, or that I in any way intended to cast a reflection on Mr. Cooper's practice or treatment. I also trust that you will admit that the attacks which have been made upon me are uncalled for.

I remain, dear sir,
Yours truly,
E. W. MURPHY.

No. VI.

Norwich, Oct. 1851.

Dear Sir,—I am obliged by the favor of your note this morning, but cannot feel that the points on which I was anxious to be informed have been quite satisfactorily answered.

You will excuse my repeating the question, *Whether a portion of placenta retained after labour can undergo hydatid degeneration?* not whether a portion of already hydatigenized placenta remaining can further develop: because in the case alluded to, even granting (which no one here does) that a portion of placenta *was left at all* by Mr. Cooper, that gentleman is prepared to swear on oath that the placenta removed was *in every respect healthy*. The fact, therefore, which you have countenanced when you gave a certificate to the effect that Mrs. Gladstone's symptoms arose from a portion of after-birth left in utero by Mr. Cooper, is that a portion of healthy placenta may remain and become afterwards hydatid. Another question I ought to have put is, *Do you consider that with a portion of placenta remaining in utero, fresh impregnation could take place within six or eight weeks?* Perhaps you are not aware that there was a fresh impregnation, for you admit you were obliged to rest upon the dictum of the homœopath Bell, but I assure you that such was the case, and the blighted fetus was distinctly seen

in the midst of the hydatid masses. You have therefore virtually given the profession the opinion that not only can retained placenta become hydatid, but fresh impregnation can take place, and the new placental structure also become similarly transformed.

When I say all the profession is against you, I mean that Mr. Cooper possesses certificates from almost every physician of eminence in London, as well as from several elsewhere, all of which are decidedly opposed to your presumed opinion. I trust you will not deem me impertinent in asking you to reconsider the opinion you gave Dr. Bell; by it you have not only bolstered up the reputation of a homœopath, but flown in the face of all honourable practitioners, as well as injured the reputation of a highly respectable and intelligent surgeon. That it has really done the latter I beg to assure you is the case; your opinion has been repeatedly hawked about amid the small gossip of the tea-table, and is the only support which can be adduced in favour of the treatment pursued in this most lamentable case.

Allow me to say, that by a revisal or explanation of your opinion you might regain the position you are well nigh losing in the estimation of the profession. At the Brighton meeting I was surrounded by parties anxious to hear about the Gladstone case, and the condemnation of your share in it was universal, and given in language which augured ill for the favour in which you would be regarded for the future. Believe me, I write in good part, for though I have not the pleasure of a personal acquaintance, the character you bear for amiability and uprightness of intention render me anxious that you should not in such a cause allow your name to be tarnished as it has been.

I remain, dear sir,
Yours truly,
W. H. RANKING.

12, Henrietta Street, Cavendish Square,
Oct. 3, 1851.

Dear Sir,—I am much obliged by your note, and have only to regret that my first correspondence upon Mrs. Gladstone's case had not been with you rather than Mr. Cooper. I have no hesitation in answering both your questions. With regard to the first, I do not believe that a portion of *healthy* placenta retained after labour can undergo hydatid degeneration, but I am not at all so clear about a placenta that had previously undergone that change, if a portion be left behind in the uterus. In Mrs. G.'s case I was told that it was necessary to remove it after her delivery, that she complained of painful uneasy sensations in the left side, which continued afterwards, and that her child had only lived a fortnight.

Putting all these facts together, I inferred that the placenta was morbidly adherent in her last confinement in consequence of this disease, and that it continued after her delivery progressively to show itself. In stating a retained portion of placenta as a cause, I cannot perceive why I should be understood to mean a *healthy* placenta: *I did not so state it.* The very assumed fact that a portion was left behind presumes it to have been *morbid*, because, unless with very ignorant persons, no portion of a healthy placenta could be left behind; while, on the other hand, the most adroit practitioner cannot always completely remove one that is morbid. The only difference between this and other cases of morbid adhesion was my suspicion that the morbid cause was hydatids. In making this statement I never for one moment intended to cast any reflection upon Mr. Cooper's treatment; I stated so to him, and would willingly have given him any explanation of my certificate to remove such an erroneous impression.

He, however, seemed much more anxious to convict me of an obvious mistake,—to prove that the cause which I assigned could not exist, and, as I perceive, has taken considerable pains to obtain the collective opinion of the profession against me, by placing before them *what is really not the question.* You will not be surprised that I should feel such a course as this perfectly uncalled for by the facts of the case. As I am conscious that my certificate, if perfectly true, could cast no reflection upon Mr. Cooper; as I have given him every opportunity to remove any erroneous impression which might exist by an explanation of my meaning; and as, further, the practical effect of my opinion was to reinstate Mr. Cooper by the dismissal of Dr. Bell, I am at a loss to perceive in what respect he is an aggrieved person; still less can I understand his right to adopt such a pretext in order to make the appeal to the profession he has done, or to make use of my name in a manner so unwarrantable.

With respect to the second question, my reply is equally easy. I do not believe that a portion of placenta could remain in the uterus together with a subsequent ovum, or that a fresh impregnation could take place while it was there. If, therefore, there was any evidence of abortion existing in Mrs. G.'s case, there could have been no diseased placenta in the uterus at the same time. Every proof of abortion negatives the probable cause that I assigned: these proofs, however, were *subsequently* in possession of Mr. Cooper. When I saw the patient there was only evidence that an hydatid mass existed in the uterus. I could not find any portion of the membranes, unless, indeed, a fragment of an

hydatid chorion, so thick that it looked more like placenta.

Permit me again to express my surprise that such an erroneous interpretation of my certificate should be given as to make it signify that "I have virtually given the profession the opinion that not only a retained placenta became hydatid, but that fresh impregnation can take place and the new placental structure also became similarly transformed." There is nothing in my certificate to warrant such a meaning. In my correspondence with Mr. Cooper I distinctly pointed out my reasons for doubting that Mrs. G. was pregnant when I saw her, on the assumption that, if she were so, the cause could not have been what I stated.

When so many errors have been made I do not wonder that the whole profession should be against me. I only trust that you will act as I am persuaded your sense of justice will dictate; that you will use your best endeavour to correct these erroneous impression, and remove the odium that, as I understand from you, has been most unfairly cast upon me.

Permit me to thank you for your evidently friendly observations. I beg you to believe that nothing is more repugnant to my feelings than "to bolster up the reputation of a homœopath." I never in my life gave any countenance to irregular practitioners.

With regard to Dr. Bell, I know nothing of him more than that he was qualified to practise. In my intercourse with him I found him in every respect a gentleman. When I met him I did not know he was a homœopath; and, in our subsequent conversation, all that I could learn of his homœopathic tendencies was that he sometimes adopted it. Dr. Bell seemed to me to be just in the same position as some of our most respectable men here, nibbling at homœopathy but afraid to bite. I had no way of judging of his merits or demerits except through the press or Mr. Cooper, and the spirit of animosity was such that I did not feel authorised to adopt the opinions of either without a more certain knowledge of him.

I remain, dear sir,

Very faithfully yours,

EDWARD W. MURPHY.

MEDICAL BENEVOLENT FUND.

Sir,—Allow me a small space in your excellent journal, first to thank you for the kind notice you have taken of the Medical Benevolent Fund, and then to append one

or two observations with regard to its working. As respects the donation fund it is to be remarked that the year 1849-50 was one of special appeal, in which a great and successful effort was made to bring the donation fund up to £2,000,—the sum which had been fixed upon as the *minimum* to be reached before the income arising from that fund could be expended upon annuities. On July 1st, 1850, upwards of £2,150 had been invested, and four annuities were granted on the 1st of the subsequent November. It was, however, to be expected, that this special and urgent appeal would cease, and therefore it was a matter of surprise that so much should have been received in donations in the following year. But, as you justly remark, the prosperity of the fund must depend upon its *annual subscriptions*; and it is very agreeable to remark, that for the last five years, there has been a steady and a considerable annual increase, both in the *amount of subscriptions* and in the number of *subscribers*, so as to afford a good hope for futurity, as well as matter for congratulation to those most deeply interested in the success of this purely charitable institution. But, sir, you remark on the inadequacy of the present increase as compared with the number of members of the profession; and you justly enquire into the cause, asking—"Is it that there is indifference to the cause of charity—that there is an objection to this mode of dispensing it—or that the annual claims on medical practitioners from other causes are already so numerous as to prevent the majority of them from listening to an appeal the justice and propriety of which they cannot deny?" "We believe that the latter, coupled with the hard struggle for the means of subsistence, is the real cause of this want of support." Perhaps there is no man in this kingdom, possessing such an amount of statistical information on this subject as myself,—of which, however, I do not intend to avail myself on the present occasion; but I am sorry to say that, in the utmost extension of charity, I cannot arrive at the same conclusion with yourself. If your own conclusion were correct, how is it that the Benevolent Fund flourishes at Bath, Brighton, Chichester, Bristol, Manchester, and Reading, and that it scarcely meets with support in Birmingham, Liverpool, Preston, Leeds, and York? That there exists an objection to the mode of distributing the charity is certain, because there are those who wish it to be apportioned by a regular meeting of all the subscribers. Yet to adopt this plan would be to destroy the privacy which constitutes the distinctive attribute of the Benevolent Fund, and to superinduce the

degrading necessity for a personal canvass. It might be very agreeable to subscribers, who love the power of giving their proxies for a half-yearly election; but, in the meantime, the quiet, unobtrusive character of the fund would be destroyed. But, Mr. Editor, the *direct appeal* to which you allude *has been made* in thousands of instances; and a very large proportion of the parties appealed to by a *written note* from the treasurer have forgotten themselves and their character as gentlemen, and have omitted to reply to such personal appeal. Most cheerfully, most nobly, have some responded to this appeal; but the great majority have determined to ignore the existence of the misery untold abounding in our profession—have determined to forget the application, and, like the priest and the Levite, to pass by on the other side. No doubt the claims upon medical men from other sources are very large; but no act can justify the forgetfulness of the wants of their own large family of professional brethren; and there are few indeed who could not spare an annual contribution from sums which are uselessly and lavishly wasted upon superfluities. Mine is a very hopeful mind; and, while I cannot bring myself to facts as they are, I yet hope that by degrees the better thing will prevail, and that the voice of pure and simple charity will prevail over those selfish excuses which too surely constitute the "art of evading a charitable subscription." I beg pardon for so long trespassing upon your columns, but I trust you will indulge me by an occasional communication with the profession through your interesting journal.—Always, Mr. Editor,

Yours faithfully,

W. NEWNHAM,

Farnham, Oct. 24, 1851.

Treasurer.

NECROSIS FROM LUCIFER MATCHES.

SIR,—My object in the publication of this letter is to direct the attention of the Provincial Association to the evils arising from the manufacture of lucifer matches, and request from that body, or the profession generally, such information as its members may have to afford. I do not presume to ask the lengthened detail of cases, as this would involve considerable trouble, but simply for brief replies to the following questions:—

1. Whether any case or cases of necrosis, from this cause, have come under the notice of any member?
2. After what period of employment?
3. Whether immediately arising from such employment, or after any and what cessation from it?
4. At what manufactory they occurred?

5. The result of the case?

6. Age of the patient and peculiarities of his condition; whether scrofulous, or having carious teeth?

7. If any preventive measures are taken at the manufactory, and what?

My reason for proposing the third question is, the necrosis produced by phosphoric fumes may arise at a considerable period after removal from the cause. A case is related by Dr. Strohl, of a young woman who had consulted him in June, 1845, who had been employed five years in a manufactory of lucifer matches; she had been accustomed to dip the matches in the preparation, and during all that period she had experienced no inconvenience. She then left the establishment, and undertook another employment. *In three months afterwards* she experienced pain in the upper jaw, which was succeeded by swelling and abscess of the gums. Eight teeth in succession became rapidly carious and were removed. When first seen by Dr. S. she had been eighteen months away from the manufactory. In many other cases the patients have left their occupation apparently suffering from a trifling pain in the face, though afterwards they have had extensive disease of the bones. In another case related by Dr. Strohl, a female, aged 22, who had been employed in the same manufactory as that last mentioned, continued for two years in good health, and until two months previous to her quitting the occupation. Afterwards the teeth became carious, and a foetid suppuration arose.

The fourth question is important because the cases which have occurred have mostly arisen from particular manufactories; and consequently it is to be supposed that deficient ventilation may have an important influence. Hence the necessity of the supervision of such manufactories, on which subject I have addressed a letter to a distinguished philanthropist, the Earl of Shaftesbury.

It seems that the Austrian Government have not thought this subject unworthy of consideration, but have ordained the observance of certain precautions which have been recommended by a medical commission. The health of artisans has been singularly neglected in England, where benevolent schemes are generally supported with equal zeal and munificence. Perhaps it may be that the profession itself has been wanting alacrity to make known the baneful results of some forms of employment, or has been deterred by a fear of giving offence, where patronage was concerned. Such fears, I need not say, are altogether beneath the consideration of an honourable and humane profession.

For the use of those who have not

already paid attention to the necrosis which arises from phosphoric fumes, I may briefly notice some of the authorities which may be consulted. Mr. Stanley, in his work "On Diseases of the Bones," alludes to this affection; Dr. Taylor in his work "On Poisons;" the *American Journal of Medical Science* for 1846, p. 525; *Chambers's Edinburgh Journal*, July, 1846; the *Lancet*, for 1847, vol. 53, p. 203; the *Lancet*, for 1849, [two papers, see index]; *La Nouvelle Encyclographie*, Aout, 1850, p. 219. I believe there are various German pamphlets on the subject, and some memoirs on it have also been addressed to the French Royal Academy of Sciences; one by M. Roussel, in February, 1846, and another by M. Sedillot, of Strasbourg, in March, 1846.

I have the honour to be, gentlemen,

Your obedient servant,

JAMES BOWER HARRISON.

Higher Broughton, Manchester.

Medical Intelligence.

UNIVERSITY OF ST. ANDREWS.

Medical Examination Papers.

October 1851.

FIRST EXAMINATION.

To be Translated into English.

CALCULOSI vero his indicibus cognoscuntur: difficulter urina redditur, paulatimque, interdum etiam sine voluntate, destillat; cadem arenosa est; nonnunquam aut sanguis, aut cruentum, aut purulentum aliquid cum ea excernitur; eamque quidam promptius recti, quidam resupinati, maximeque ii qui grandes calculos habent, quidam etiam inclinati reddunt, colemque extendendo, dolorem levant. Gravitatis quoque cujusdam in ea parte sensus est: atque ea cursu, omnique motu augentur.

Auditus autem semper patet: ejus enim sensu etiam dormientes egemus; a quo, cum sonus est acceptus, etiam e somno excitamur. Flexuosum iter habet, ne quid intrare possit, si simplex et directum pateret. Provisum etiam, ut, si qua minima bestiola conaretur irrumperere, in sordibus aurium, tanquam in visco, inhaerere secret. Extra autem eminent, quæ appellantur aures, et tegendi causa factæ tutandique sensus, et ne adjectæ voces laberentur atque errarent, priusquam sensus ab his pulsus esset. Sed duros et quasi corneolos habent introitus, multisque cum flexibus, quod his naturis relatus amplificatur sonus.

1. What compounds does nitrogen form with oxygen?

2. What is the constitution (proximate and ultimate) of each of the following salts—viz., phosphate of lime, muriate of ammonia, and bicyanide of mercury?

3. In what condition does morphia exist in opium? How is it usually obtained, and what are its chemical characters?

4. Describe the *modus operandi* and the principal uses of tartar emetic.

5. Describe the medicinal uses of colchicum, digitalis, aconitum, hyoscyamus, and cannabis indica. Name, in each case, the part or parts of the plant employed, and the average dose of their pharmacopœial preparations.

6. Write Latin prescriptions (without using abbreviations) for a purgative draught containing oil of turpentine and castor oil, and for a tobacco enema.

SECOND EXAMINATION.

1. Describe the minute structure and the chemical composition of bone.

2. Describe the anatomy of the hip-joint, and name the dislocations to which it is subject.

3. Give a sketch of the anatomy of the tongue, and state the functions of its different nerves.

4. Describe the course of the common carotid artery in the neck, and point out its relations to the adjacent vessels and nerves.

5. Describe the changes which the food undergoes in its passage along the alimentary canal.

6. Explain how the movements in the acts of respiration, deglutition, and defecation, are dependent on reflex action.

THIRD EXAMINATION.

N.B. In answering the practical questions, candidates are required to specify the mode of treatment they are in the habit of adopting, and the doses which they usually prescribe.

1. How are active, mechanical, and passive congestion, respectively produced? Give one or more examples of each variety.

2. Give a sketch of the different forms of inflammation of the conjunctiva, and of the treatment which they require.

3. Describe the symptoms, anatomical characters, and treatment of croup.

4. Describe the symptoms, causes, and treatment of urticaria and prurigo.

5. Describe the symptoms, causes, and treatment of chronic synovitis.

6. Describe the nature and treatment of carbuncle.

7. Give a brief sketch of the symptoms, morbid appearances, diagnosis, and treat-

ment of the principal varieties of puerperal fever.

LIST of gentlemen who had the degree of Doctor of Medicine conferred upon them, 17th Oct., 1851:—

R. Beales, L.A.C., London.

J. Brown, M.R.C.S. and L.A.C., Islington.

J. Cowie, M.R.C.S., Ed., Zetland.

A. S. Fogo, M.R.C.S., London.

C. Gibson, M.R.C.S. and L.A.C., Newcastle-upon-Tyne.

F. Goodchild, M.R.C.S., Middlesex.

J. F. Grace, M.R.C.S., London.

N. J. Highmore, M.R.C.S. and L.A.C., Bradford, Wilts.

E. Humby, M.R.C.S. and L.A.C., London.

C. D. Kingsford, M.R.C.S., Middlesex.

T. J. W. Marsh, M.R.C.S. and L.A.C., Surrey.

G. Miller, M.R.C.S. and L.A.C., London.

J. P. Nash, M.R.C.S., Calcutta.

J. Roulston, M.R.C.S. and L.A.C., Yorkshire.

T. Torney, M.R.C.S., Ed., Dublin.

H. Uwins, M.R.C.P. and M.R.C.S., London.

J. Walling, M.R.C.S. and L.A.C., Yesland, Lancaster.

H. W. Watson, Arnold, near Nottingham.

APOTHECARIES' HALL.

PRELIMINARY EXAMINATION.

October 18th, 1851.

XENOPHON, ANABASIS, BOOK I. CHAP. III.

Εκ δε τούτου ανισταντο, οἱ μὲν ἐκ τοῦ αυτοματου, λεξοντες, ἀεγινωσκον· οἱ δὲ καὶ ὑπ' ἐκεينو ἐγκελευστοι, ἐπιδεικνυντες, οἷα εἴη ἡ ἀπορία, ἀνευ τῆς Κυρου γνώμης καὶ μένειν καὶ ἀπιεναί. Εἰς δὲ δη εἶπε, πρόσποιονμένους σπένδειν ὥς ταχίστα πορευέσθαι εἰς τὴν Ἑλλάδα, στρατηγούς μὲν ἐλεσθαι ἁλλούς ὥς ταχίστα, εἰ μὴ βουλευται Κλεάρχος ἀπαγεῖν· τὰ δ' ἐπιτηδεῖα ἀγοράζεσθαι (ἢ δ' ἀγορὰ ἦν ἐν τῷ βαρβαρικῷ στρατεύματι) καὶ συσκευάζεσθαι· ἐλθόντας δὲ Κυροῖ ἀτεῖν πλοῖα, ὥς ἀπὸ πλείοειν.

Morning Examination.

Translate the following passages into English:—

VIRGIL, ÆNEID, BOOK I.

Talia jactanti stridens Aquilone procella
Velum adversa ferit, fluctusque ad sidera tollit.

Franguntur remi: tum prora avertit, et undis

Dat latus: insequitur cumulo præruptus aquæ mons.

Hi summo in fluctu pendent, his unda dehiscens

Terram inter fluctus aperit: furit æstus arenis.

Tres Notus abreptas in saxa latentia torquet:

Saxa vocant Itali, mediis quæ in fluctibus Aras,

Dorsum immane mari summo. Tres Euris
ab alto

In brevia et syrtes urget, miserabile visu:
Illiditque vadis, atque aggere cingit arenæ.
Unam, quæ Lycios fidumque vehebat Oron-
tem

Ipsius ante oculos ingens à vertice pontus
In puppim ferit: excutitur, pronusque
magister

Volvitur in caput: ast illam ter fluctus
ibidem

Torquet agens circum, et rapidus vorat
æquore vortex.

Apparent rari nantes in gurgite vasto:
Arma virum tabulæque, et Troia gaza per
undas.

CICERO, ORATIO PRO MILONE.

Unum genus est adversum infestumque
nobis, eorum quos P. Clodii furor rapinis,
incendiis, et omnibus exitiis publicis pavit:
qui hesternâ etiam concione incitati sunt,
ut vobis voce præirent, quid judicaretis:
quorum clamor, si quis forte fuerit, ad-
monere vos debebit, ut eum civem retineatis,
qui semper genus illud hominum, clamo-
resque maximos pro vestra salute neglexit.
Quamobrem adeste animis, Judices, et
timorem, si quem habetis, deponite.

GOSPEL OF ST. LUKE, CHAP. 15.

Λέγω ὑμῖν, ὅτι οὕτω χαρά ἐσται ἐν τῷ οὐρανῷ ἐπὶ
ἐνὶ ἁμαρτωλῷ μετανοοῦντι, ἢ ἐπὶ ἐννεήκοντα ἑνὲν
δικαίοις, οἵτινες οὐ χρειαν ἔχουσι μετανοίας.

Ἡ τις γυνὴ δραχμὰς ἔχουσα δέκα, εἰάν ἀπολεσῇ
δραχμὴν μίαν, οὐχὶ ἅπτεϊ λυχνόν καὶ σαροὶ τὴν
οἰκίαν, καὶ ζητεῖ ἐπιμέλως, ἕως ὅταν εὕρῃ;

Καὶ εὕρουσα συγκαλεῖται τὰς φίλας καὶ τὰς γειτο-
νας, λέγουσα· Συγχαρήτε μοι ὅτι εὗρον τὴν δραχμὴν
ἣν ἀπολεσα.

1. Give the present tense, first pers. sing.,
and the first future, of the following verbs:
ἐσται, ἔχουσι, ἀπολεσῇ, ἅπτεϊ, ζητεῖ, εὕρῃ, συγ-
καλεῖται, συγχαρήτε.

2. Distinguish between *ἐν* and *ἐν*, *εἰς* and
εἰς, *οὐ* and *οὐ*, *ἦν* and *ἦν*.

ALGEBRA.

$$\left. \begin{array}{l} 5x - 4y = 19 \\ 4x + 2y = 36 \end{array} \right\} \text{to find } x \text{ and } y.$$

EUCLID.

Describe a square upon a given straight
line.

Afternoon Examination.

Translate into English the following:—

VIRGIL, ÆNEID, BOOK I.

Urbs antiqua fuit, Tyrii tenuere coloni,
Carthago, Italiam contra, Tyberinaque
longe

Ostia: dives opum, studiisque asperrima
belli;

Quam Juno fertur terris magis omnibus
unam

Posthabitâ coluisse Samo. Hic illius arma,
Hic currus fuit: hoc regnum Dea gentibus
esse,

Si quâ fata sinant, jam tuum tenditque
fovetque.

CICERO, ORATIO PRO MILONE.

Est enim hæc, Judices, non scripta, sed
nata lex: quam non didicimus, accepimus,
legimus, verum ex naturâ ipsâ arripuimus,
hausimus, expressimus: ad quam non docti
sed facti, non instituti, sed inbuti sumus:
ut si vita nostra in aliquas insidias, si in
vim, si in tela aut latronum, aut inimicorum
incidisset: omnis honesta ratio esset expe-
diendæ salutis. Silent enim leges inter arma,
nec se expectari jubent, cum ei qui expectare
velit, antè injusta pœna luenda sit,
quàm justa repetenda. Etsi persapienter,
et quodammodo tacitè, dat ipsa lex potes-
tatem defendendi: quæ non modò hominem
occidi, sed esse cum telo hominis occidendi
causâ vetat: ut, cum causa, non telum
quæreretur, qui sui defendendi causâ telo
esset usus, non hominis occidendi causâ
habuisse telum judicaretur.

1. Scan the first three lines of the quota-
tion from Virgil, marking all the quantities.

2. Write the first pers. sing. pres. tense
of the following verbs:—Coluisse, sinant,
didicimus, arripuimus, hausimus, expressi-
mus, quæreretur, usus esset.

GOSPEL OF ST. LUKE, CHAP. X., VERSES
25, 26, 27, 28.

Καὶ ἰδὼν νομικὸς τις ἀνεστή, ἐκπείραζων αὐτὸν, καὶ
λέγων, Διδασκαλε, τί ποιήσας ζωὴν αἰώνιον κληρονο-
μήσω; ὁ δὲ εἶπε πρὸς αὐτὸν, Ἐν τῷ νόμῳ τί γεγραπ-
ται; πῶς ἀναγινώσκεις; ὁ δὲ ἀποκριθεὶς εἶπεν,
Ἀγαπήσεις κυρίον τὸν Θεὸν σου, ἐξ ὅλης τῆς καρδίας
σου καὶ ἐξ ὅλης τῆς ψυχῆς σου, καὶ ἐξ ὅλης τῆς
ισχύος σου καὶ ἐξ ὅλης τῆς διανοίας σου· καὶ τὸν
πλησίον σου ὡς σεαυτὸν. Εἶπε δὲ αὐτῷ, Ὁρθῶς
ἀπεκρίθης· τοῦτο ποιεῖ καὶ ζήσῃ.

Give the present tense and first future of
the following:—ἀνεστή, γεγραπται, ἀναγινωσ-
κεις, ἀπεκρίθης, ποιεῖ, ζήσῃ.

EUCLID, BOOK I.

Parallelograms upon the same base, and
between the same parallels, are equal to
each other.

ALGEBRA.

Divide $6x^4 - 96$ by $3x - 6$.

OBITUARY.

On the 12th inst., Henry Hawes Fox, M.D.,
at Northwoods, in the county of Gloucester,
aged 63.

On the 20th of August last, at Sierra
Leone, on his way home from the Cape of
Good Hope, Charles Whitefield Priaulx,
of Southampton, surgeon in the Royal
Navy, aged 43. He had previously passed
many years on the coast of Africa, and his
remains were attended to the grave with
full military honours by Captain Temple
and officers of H. M. ship Dolphin, the
officers and soldiers of the garrison, and
the principal surgeons and merchants of
Sierra Leone.

SUBURBAN CEMETERIES FOR METROPOLITAN INTERMENTS.

AN award has recently been made on the amount of compensation to be paid to two of the Metropolitan Cemetery Companies for the concession of their cemeteries for the purposes of the Interments Act.

For the Brompton Cemetery, the sum claimed as compensation by the company was 168,762*l.* 12*s.* 8*d.*; the sum offered in behalf of the public by the General Board of Health was 43,856*l.* For the Nunhead Cemetery the sum claimed was 99,349*l.*; the sum offered was 39,871*l.* On the part of the Brompton Cemetery Company evidence was given to prove the actual expenditure of 107,000*l.* for works, and proof was given that 63,300*l.* had been actually expended on the Nunhead Cemetery. Both companies claimed compensation for prospective profits on the discontinuance of the practice of intramural interments, and also compensation for compulsory purchase.

The award of the umpire, Mr. Barnes Peacock, now officially notified, was for the two:—

| | |
|--|------------|
| As compensation for the Brompton Cemetery, for which 168,762 <i>l.</i> 1 <i>s.</i> 8 <i>d.</i> was claimed by the company, and 43,836 <i>l.</i> offered on behalf of the public... | £74,921 14 |
| For the Nunhead Cemetery, for which 99,349 <i>l.</i> was claimed by the company, and 39,871 <i>l.</i> offered by the Board of Health on behalf of the public..... | 42,153 13 |

Total..... £117,075 7

being 151,036*l.* 5*s.* 8*d.* less than was claimed, and coming within the rate of the estimate presented by the General Board of Health to parliament.

So far as these two cases go, they are in accordance with the view that the trading companies have no claims to prospective profits, founded on the assumption that intramural interments would be discontinued without making any provision for the public, and that it is not the amount which may have been expended, whether wastefully or otherwise, which is to form a basis for compensation, but the actual worth of the property, as shown by the dividend and the prices of shares at the time the change was proposed.

CENTRAL LUNATIC ASYLUM.

THE visitors of the Gloucester County Lunatic Asylum have memorialized the Secretary of State for the Home Department for the establishment of a Central Criminal Lunatic Asylum.

A NEW AND SAFE CAUSTIC-HOLDER.

WE have had submitted to our notice, by the inventor, Mr. E. Nash, of Coppice Row, Clerkenwell, a very elegant and ingenious silver caustic-holder, which is constructed on the principle of the ever-pointed pencil. It is peculiarly adapted to the employment of a caustic, where it is a matter of importance to restrict its application within definite limits. The point of the holder is constructed of *palladium*, upon which the nitrate of silver exerts no chemical action. For utility and elegance, therefore, we can strongly recommend these instruments to the attention of our readers. Caustic-holders made of palladium in the ordinary form are also made by Mr. Nash, and have the same advantage of resisting the action of nitrate of silver.

PUBLICATION OF HOMŒOPATHIC WORKS.

THE profession will be pleased to learn that Messrs. Highley and Son, the Medical Publishers and Booksellers to the Royal College of Surgeons of England, have declined the further publication of the *Homœopathic Journal*, and all publications relating to Homœopathy.

ROYAL COLLEGE OF SURGEONS.

THE following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at the meeting of the Court of Examiners on the 24th inst.:—Messrs. George Money Swinhoe, Calcutta—John Kearns, Kilkenny—William Barnes Rainey, Spilsby, Lincolnshire—John Tom Gabriel, Devonport—John M'Kidd, Edinburgh—Robert William Ellis, Bristol—Thomas John Hughes, Lampeter, Cardiganshire—and George William Paynter, Australia.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 23d October, 1851:—Edward Horatio Sweke, Bristol—George Atkin, Sheffield—William Davey Haye, Callington, Cornwall—Thomas Nash, Liverpool—Thomas Odell, Newport Pagnell.

MEDICAL SCIENCE AND MEDICAL PRACTICE.

FEW if any of the sciences are established upon a firmer basis than that of medicine. Its principles have their foundation in nature's laws, and are consequently immutable. The same elementary and fundamental truths which were discovered and proclaimed two thousand years ago, have lost none of their value, but on the contrary have ever since been corroborated

daily. Like the precepts of the gospel, they have withstood the assaults of opposing forces for ages, but are as true to-day as ever they were. Not so with opinions; they are ever changing—taking their character from the evidence on which they rest. Thus have theories had their origin, rise, and fall. Thus have systems been reared, cherished, and finally abandoned to make room for more favored rivals which in their turn are to share the same fate. As in theology, so in medicine, among a multitude of errors there may be found many glorious truths! While the one has ever been receiving the united opposition of a thousand and one *isms*, the other has been constantly opposed by as many *pathies*. Undoubtedly every system of medical practice contains some truth, while all contain more or less error. But medical science lays claim to *all the truth in every system*. Who does not know that the theory of Thomson, “*that heat is life and cold is death*,” is in certain cases literally true? Who will deny that there is *some* truth in that chief of medical delusions, homœopathy—that “*similia similibus curantur*” is *ever* true?—that infinitesimal doses are *sometimes* best?—that diet and regimen are all-important in the treatment of disease? Who will deny that the same, with a rational use of water both externally and internally, is often of the greatest service, as in hydropathy? If there was no truth in these systems of practice, they could not exist at all. It is the little truth they contain which enables them to cke out their ephemeral existence as long as they do. But here an important question arises. If regular physicians lay claim to all the truth in the science, why is quackery so much patronized as it is? This leads me to speak of medical *practice*, more particularly in our own ranks. The facilities for entering our profession are so great, that hundreds are induced into it who have neither mental, moral, or physical ability to practise the profession with any success. The country is filled with doctors — yes, M.D.s — graduates of our best colleges, many of whom can *never* practise with credit to themselves or with safety to their patients. It is done in this way:—Physicians are anxious to have students in their offices, as well for the honour of the thing as for the service they receive from them. The colleges are anxious to swell the number of their respective classes, in order that their salaries may swell in proportion. They graduate as many as they can, that their next catalogue may appear well, feeling under some obligations, no doubt, to such as have paid for one or two courses of lectures, remembering, at the same time, that diplomas nett them from fifteen to thirty dollars

each. These are some of the reasons why the profession is so full, and why so many are unqualified to become guardians of the public health. The result is, that there are more quacks with diplomas than there are without them. Medical science is charged with all their errors, and she is thus brought into disrepute. I have seen many a case of simple fever, which, if left entirely in the hands of nature, would have terminated in from twelve to twenty days, protracted to as many weeks by the injudicious use of powerful medicines administered by those who possess the highest authority to practice attainable in our schools. When such cases fall into the hands of homœopathy, and they forthwith recover by the curative forces of nature, medical science has to suffer, while a medical delusion bears off the palm. Who wonders that men, after having been drugged already to death, barely escaping with a broken constitution, should fly to the opposite extreme, and become advocates of homœopathy? As much as I admire and value rational and judicious practice, I had rather be left in nature’s care, and take powders of sugar until she restores me to health, than to lay on my back and swallow nauseous drugs every hour, day and night, for months together. Of two evils I would choose the lesser. Both are aside from the truth, but the former is by far the safer error. There are, it is true, many highminded and intelligent physicians among us, who are alike an honor to the profession and a blessing to the race; and I would fain have reason to believe that there is no reverse side of the picture. It is of no use to war against quackery, while so much of it is found among ourselves; and who does not see that ignorance in our profession is far more to be dreaded than in homœopathy? Our medicines are “*edged tools*,” which, if used by skilful hands, are capable of doing much good, while in ignorant hands they must, in the nature of the case, produce disastrous results. Homœopathy is a nullity; and consequently is practised with as much safety by the ignorant as by the learned. Nature performs her task equally well whether sugar of milk is given by the one or the other; and much better then when *interfered* with by injudicious medication.

Well, what is the remedy? We sometimes say, “a disease is half cured when we know what it is.” If so, how important it is in this case that our *diagnosis* be correct. Mine is more than hinted at in the foregoing desultory remarks. If I am correct, the remedy is a plain one, though perhaps not of so easy an application as might be desired in this our *free* nation.—*Boston Medical Journal* for 1851.

ACUTE NEPHRITIS; LATENT.

THE patient was a woman, æt. 50, and had been sick since the summer of 1849. Disease came on with vomiting, purging, and excessive pain in the abdomen, lasting more or less for several weeks. Last February, Dr. Ware saw her, with much the same symptoms; there was then also felt a tumour below the right hypochondrium, varying much in size at different times, and usually very tender and painful; whole abdomen occasionally distended and tympanitic; she gradually sank; the immediate cause of death being probably the nephritis, or a pneumonia which was found to some extent, though no symptoms referable to either disease were observed during life; the urine not being deficient in quantity, though for a short time before death it deposited a thick lateritious sediment.

On dissection, both kidneys were found most extensively inflamed, and the form of inflammation very much like what is observed in the case of purulent deposits; being in distinct foci, from a fourth to half an inch in extent, and characterized by an effusion of thick pus, or by a mixture of pus and lymph, or by the simple infiltration of lymph; the redness about the deposits being very limited, and evidently due, in part, if not wholly, to the extravasation of blood. Where pus alone is found, proper abscesses are of course formed. The intervening structure healthy; the tubular portions being scarcely, if at all, affected; mucous membrane very slightly affected. The idea of phlebitis not having occurred, the veins were not examined.

The stomach and intestines were examined carefully throughout, and found to be quite healthy. The liver, however, was somewhat diseased in structure; and though not generally enlarged, the right lobe was prolonged downwards nearly to the ilium, forming the very distinct and moveable tumour felt during life. The absence of any disease in the alimentary canal, even supposing the liver to have been previously affected, appeared to be an interesting circumstance.

Another curious fact was observed, and which Dr. Jackson has met with once before, though he has never heard the possibility of it alluded to, and that was the existence of a small distinct tumour formed by the pylorus, though this portion of the stomach, as well as every other, was healthy, the thickness and consistence being perfectly normal. The tumour was as distinct after death as before, and the explanation of it was determined as soon as the abdomen was opened.—*American Journal of the Medical Sciences.*

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Oct. 25.

| BIRTHS. | | DEATHS. | |
|-----------|------|-----------|-----|
| Males.... | 876 | Males.... | 512 |
| Females.. | 797 | Females.. | 465 |
| | 1673 | | 977 |

CAUSES OF DEATH.

| | |
|--|-----|
| ALL CAUSES | 977 |
| SPECIFIED CAUSES | 970 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 268 |
| <i>Sporadic Diseases, viz.—</i> | |
| 1. Dropsy, Cancer, &c. | 37 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 126 |
| 4. Heart and Bloodvessels..... | 43 |
| 5. Lungs and organs of Respiration | 109 |
| 6. Stomach, Liver, &c. | 48 |
| 7. Diseases of the Kidneys, &c. | 17 |
| 8. Childbirth, Diseases of Uterus, &c. | 5 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 6 |
| 10. Skin..... | 1 |
| 11. Premature Birth | 0 |
| 12. Old Age | 43 |
| 13. Sudden Deaths..... | 2 |
| 14. Violence, Privation, Cold, &c.... | 25 |

The following is a selection of the numbers of Deaths from the most important special causes:

| | | | |
|--------------------|----|------------------|-----|
| Small-pox..... | 22 | Convulsions..... | 36 |
| Measles..... | 13 | Bronchitis | 43 |
| Scarlatina | 67 | Pneumonia | 45 |
| Hooping-cough | 11 | Phthisis | 123 |
| Diarrhoea..... | 30 | Lungs | 8 |
| Cholera..... | 1 | Teething | 3 |
| Typhus..... | 79 | Stomach | 10 |
| Dropsy | 14 | Liver..... | 9 |
| Hydrocephalus | 25 | Childbirth | 5 |
| Apoplexy | 22 | Uterus | 0 |
| Paralysis | 27 | | |

REMARKS.—The total number of deaths was 49 above the average mortality of the 43d week of ten previous years.

METEOROLOGICAL SUMMARY.

| | |
|---|--------------------|
| Mean Height of the Barometer | 30.04 |
| " " " Thermometer ^a | 54.5 |
| Self-registering do. ^b | Max. 0.0 Min. 37.3 |

^a From 12 observations daily. ^b Sun.

RAIN, in inches, 0.0. — Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 6° above the mean of the month.

NOTICES TO CORRESPONDENTS.

K. R., York.—The Examination Papers were sent to us officially for publication. We have no means of obtaining the questions put at the *viva voce* examinations.

Dr. Barclay's Report of Cases from St. George's Hospital has reached us.

We regret to be obliged to postpone the King's College Hospital Report, and Mr. Dobell's continuation-paper, until next week.

The contributions of Dr. Belcombe and Dr. Hannover will be published in the following number.

ERRATA.—In our last number, page 719 and throughout the review, for "Cross," read "Gross."

Lectures.

INTRODUCTORY LECTURE,

DELIVERED AT THE LONDON HOSPITAL,
ON THE OPENING OF THE MEDICAL
SESSION,

ON OCTOBER 1ST, 1851.

BY DR. FRASER,
Assistant-Physician to the Hospital.

[Concluded from page 747.]

4th. The student cannot fail to observe the hosts of quacks who infest and canker every department of medicine. He naturally asks, How is this? You paint, he naturally exclaims, the charms of a glorious profession, while I see the canvas so bedaubed with false and tinsel colours, that the true beauty of the work is hard to be made out. I can only say, by way of reply, in the words of Bacon, "The weakness and credulity of man is such, as they often prefer a mountebank or witch before a learned physician; and, in truth, witches and impostors have always held a competition with physicians." Also Cabanis says,*—"In every country, and throughout all time, we see everywhere man embracing chimeras: he is the subject of the most shameful prejudices; he seeks, cherishes, deifies, and adores them." You will say this is poor encouragement to study such an arduous profession. I admit that it is "a great discouragement;" and therefore it is the more necessary for me to place the truth before you, in order to uphold the wavering, and to stimulate the ardent.

The blasting influence of Bacon's "impostors" on the progress of science, and the direct injury to the public health from their malpractices, is too evident to warrant indifference on any plea whatever.

As illustrations of the quackeries of former days, I shall mention only one or two: but the list could be continued "usque ad nauseam." "In the year 1637 an order was sent to the College from the Star Chamber to examine one 'Leverett,' who said that he was a seventh son (afterwards disproved by the register), and undertook the curing of several diseases by "stroaking;" and in so doing, there goeth out of him so much virtue and strength, that he doth not recover it in so many days." "In 1739 Joanna Stephens made known her famous medicine for stone in the following words:†—"My medicines are a

powder, a decoction, and pills. The *powder* consists of egg-shells and snails, both calcined. The *decoction* is made by boiling some herbs together, with a ball, which consists of soap, swine's cresses burnt to a blackness, and honey and water. The *pills* consist of snails calcined, wild carrot seeds, bardock seeds, ashen keys, hips and hawes, soap and honey." For this very notable document poor John Bull, through the wisdom of his legislators, was made to pay the sum of £5,000! We may therefore fairly consider it as the best paid prescription ever written.

Tar-water was used by the ancients as a remedy against poisons,—alias poisoned bites, phthisis, scrofula, paralysis, and asthma; but it was renewed by one of our reverend friends—the Right Rev. Dr. Berkeley, Lord Bishop of Cloyne, who in 1764 wrote as follows:—"From my representing tar-water as good for so many things, some, perhaps, may conclude that it is good for nothing; but charity obligeth me to say what I know, and what I think, however it may be taken. Men may censure and object as they please, but I appeal to time and experiment. I am most sincerely persuaded, from what I have already seen and tried, that tar-water may be drunk with great safety and success for the cure and relief of most, if not all diseases, of ulcer, itch, scald-heads, leprosy, the foul disease, and all foul cases; scurvies of all kinds; disorders of the lungs, stomach, and bowels; gouty and nephritic ailments; pleurisies, peri-pneumonia, erysipelas, and all kinds of fevers; hysterics, and all nervous cases; dropsies, decays, and other maladies. Nor is it in use only in the case of sickness: it is also useful to preserve health and guard infection, and in some measure even against old age, as it gives lasting spirits, and invigorates the blood. I am even induced, by the nature and anatomy of things, and its wonderful success in fever of all kinds, to think that tar-water may be useful against the plague, both as a preservative and a cure."

In Queen Elizabeth's reign Sir Francis Wakingham writes to Dr. Gifford concerning one Margaret Kennix:—"Whereas, that the poor woman should be permitted by you quietly to practise and minister to the curing of diseases and wounds by the means of certain simples, in the application whereof it seemeth God hath given her an especial knowledge."

In the same reign, "Simon Forman boasted that he made use of no other help for the discovery of distemper but his ephemerides; and that, by the heavenly signs, aspects, and constellations of the

* Coup d'œil, p. 188.

† Extracted from "Gazette," June 19th, 1739.

planets, he could presently know every disease." Also

A Mrs. Woodhouse resided at the same time at Kingsland, who cured people "bewitched and planet-struck," and whose knowledge of the virtues of her medicines may be known by her replies. On being asked, she said "pepper" was "cold"—violets and strawberries "cold and dry." Also, about the same time, a Dr. Francis Anthony, otherwise a very good man, rendered himself notorious by promulgating as an universal medicine, his "Aurum Potabile," or "potable gold."

In 1776 Dr. Mayerback was notorious in London by ascertaining, from a sight of the urine, the primary cause of all diseases, and, consequently, to cure them in a few days. In reference to this subject, a quaint writer of 1714, John Bellers, asks "Whether a set of persons may not be bred up, used to taste urine and blood, and thus be a means to discover a more distinct knowledge of diseases?"

"Perkins's Metallic Tractors" attracted great attention in 1799; but the deception was fully exposed by Dr. Haygarth, a fine old physician at Bath, who writes—"The tractors have obtained such high reputation at Bath, even among persons of rank and understanding, as to require the particular attention of physicians. Let their merit be impartially investigated, in order to support their fame, if it be well founded, or to correct the public opinion if merely founded on delusion." In pursuance of this honest motive, Dr. Haygarth submitted five patients labouring under chronic gout and rheumatism—one of the diseases in which the tractors were said to be most useful—to the operation, which is done by describing circles, squares, triangles, &c., upon the part affected, by a pair of false tractors, being made of wood, and painted to resemble the genuine metallic tractors. All the five patients declared themselves better after one or two operations! On another occasion Mr. Richard Smith, of the Bristol Infirmary, was obliged to use two tenpenny nails, disguised with red and black sealing-wax, the pieces of stick he had previously been in the habit of using having been borrowed, and the old nails were quite successful. "Indeed (says this gentleman), pieces of blacklead pencil, pieces of tobacco-pipes—in truth, anything at hand, if mysteriously applied, produced benefit."

We could easily show that the medical heresies of our own time are, in many respects, only a revival of the absurdities which were, by our ancestors, attributed to witchcraft, spells, amulets, &c. &c.; and it is refreshing to observe that the members of our profession have invariably

taken the lead in disabusing the public mind, by teaching correct ideas as to health and disease.

In the year 1612—a time when churchmen, and the judges and nobles of the land, were only emerging from bigotry, intolerance, and ignorance—we have Dr. John Cotta, of Northampton, saying—"I desire only to moderate the general madness of this age, which ascribeth unto witchcraft whatsoever falleth out unknown or strange unto a vulgar sense."

This same gentleman, in his "Dissertation on Spells," relates the following "merrie historie" of an approved famous spell for sore eyes:—"By many honest testimonies it was a long time worn as a jewell about many necks, written on paper, and enclosed in silke, never failing to do soveraigne good, when all other helps proved helplisse. No sighte might dare to read or open: at length a curious mind, while the patient slept, by stealth ripped open the mystical cover, and found the powerful characters in Latin—'Diabolus effodiat tibi oculos, impleat foramina stercorebus.'"

We have now to deal with the three great heresies of the present day—homœopathy, mesmerism, and hydropathy. The first we encounter is the solemn farce of homœopathy, denounced by the French Academy of Medicine in 1836 "as a dangerous mode of treatment, and the offspring of quackery." With the same absence of truth or usefulness as its sister fallacies, the alleged claims of its supporters are exceeding great and mighty. Hahnemann would appear to have said—"I must be believed:" "I believe in homœopathy:" "therefore homœopathy must be believed." The mantle of egotism has descended upon his successors. We have in them, as in him, the same mock dignity of style, the same illogical deductions, and the same determined defamation not only of the doctrines but of the characters of medical men. In proof of the former, I shall quote Hahnemann's own words:—"The best and true method of cure is founded on the principle of '*similia similibus curantur*,' which means, 'to cure in a mild, prompt, safe, and durable manner, it is necessary to choose in each case a medicine that will excite an affection similar (*ὅμοιον πάθος*) to that against which it is employed;" or, in other words, to select a medicine on consideration of the curative symptoms.

But the origin of the system is the doctrine of signatures,* which means that on

* King James I. ought to be considered, among his other learned qualities, as the first homœopathist, for he says, "The art of physicians is very imperfect; for I doubt not but for

plants there are certain symbols indicating the disease to be cured by its aid. Now if a homœopathic agent induces certain morbid effects when administered to a healthy person, how can the same, or a similar agent, when administered to a diseased person, induce an effect which must be already present, the disease being there? That is, we cannot have the same effect produced which has already been produced. Again, Hahnemann says—"It is a very *natural supposition* that the curative effects of a medicine in disease, somehow or other, depend upon its power of deranging the functions of healthy individuals." I would inquire, how is it a "natural supposition?" We have, you perceive, upon this sheer and baseless assumption, the whole fabric of homœopathy raised.

Dr. Simpson, an early writer on the subject, says,—“That should an improper medicine be given, from the smallness of the dose no positive evil will follow, as the only injury sustained will be from the loss of time.” I would ask, if so powerful when judiciously, how is it less so when injudiciously given? The same gentleman says,—“Let practitioners of the old school, instead of endeavouring to account for effects, which they cannot deny, by false assertions, study the subject fairly, and they will then assuredly find that the susceptibility of the animal frame for its specific irritant is a fact perfectly analogous with that of chemical solution for its specific re-agent, and equally rational.” This doctrine would truly bring the human body to resemble a laboratory, and all its organs crucibles.

The homœopathic doctrine infers in our bodies the presence of what may be considered our three evil geniuses, viz., syphilis, sycosis, and itch. These, according to the homœopathic creed, have been handed down with a vengeance to the third and fourth generations, seeing that for two thousand years, acting upon different organisms, they have produced the incalculable number of diseases under which our vexed bodies labour. The homœopathist takes no account of anything “except the ensemble of the symptoms.” They discard physiology and pathology, considering the labours of a Carpenter, a Hasse, and an Andral, as superfluous. They say virtually, “We regard not the cause, we have to do with symptoms only.” Now, we know that similar symptoms may be present in diseases differing entirely from each other, and requiring a totally different treatment. It very often happens that the real local disease is marked by some one every disease, there is in nature a several simple”—“if they could but find it out,” he sagaciously adds.

general symptom, and if this symptom only be treated as the disease, the most disastrous and fatal consequences may follow. The hidden annals of homœopathy could supply many melancholy illustrations. For example, in fever we may have delirium marking some serious organic mischief in the lungs, heart, liver, &c., the brain being intact; the homœopathist would treat the delirium only! Pain in the knee in “*morbus coxarius*,” this would be rheumatic! Palpitation of the heart from disease of the stomach, or internal hæmorrhage; here, the real disease would be *totally* overlooked! In fact, the art of diagnosis must ever remain imperfect, and indeed inapplicable, with homœopathists.

The homœopathist has a specific remedy for each disease, no matter what its cause. This doctrine has a direct injurious effect upon true medicine, because it chokes further investigation. As regards the doctrine of infinitesimal doses, it is so at variance with common sense, and so outrages all our previous ideas, that we do not consider it necessary to enlarge upon that part of the subject. I may just observe, that to give true effect to the system, and to avoid all counteracting external agencies, the patient would require to reside in a glass case, or “a crystal palace.” If homœopathy be true, then the wonder ought to be, not that we in the old school never cure a patient, but, that we do not kill outright all that ever fall into our hands. But, from the records of 2,000 years, we know that such is not the case, and as we know, which you may easily verify, that the whole strain of homœopathic arguments are illustrations of the “*petitio principii*,” or the “*pro causa non causa*,” also, that great doubts have been thrown on the correctness of their statistics, thus stultifying in the most vital part all their arguments. Judging from the “*ad misericordiam*” resolutions put forth by the united homœopathic wisdom, in reply to the spirited resolutions expressed against homœopathists at the late Brighton meeting, they have a very poor case indeed, and the *Lancet* very appropriately calls it their “*impotent rage*.”

There is only one rational application of the doctrine of which I know,—that propounded, and I have no doubt frequently acted upon by the learned monks of the school of “*Salernum*,” although I do not counsel you to follow the prescription, which is taken from the medical code of that ancient school, and said, by the author of the “*Notes on Naples*,” to be the longest professional prescription ever written:—
“*Si nocturna tibi noceat potatio vini,
Hoc ter manè bibas iterum, et fuerit Medicina,*”

The next fashionable fallacy is mesmerism, so called from Mesmer, a German physician, who, in 1772, was the first to bring it into great notice; although he cannot claim to have been the earliest in the field, as in 1637 we have the boy "Leverett" making passes or "strokes," as they were then called. This fallacy, like homœopathy, was also denounced by a French commission, which sat in 1784, having for one of its most influential members the famous Benjamin Franklin. This commission has recorded several cases of complete failure, when carefully tested, in the results of the pretended science; in truth, so marked were the failures, that the commission came to the conclusion that—"Compression, imagination, and irritation, are the causes of the effects attributed to the new agent." I intended to give you a resumé of all that has been written on this subject, but time will not allow; I shall, however, draw your attention to some points, as it is necessary that you should be induced to examine further, to convince yourselves of the weakness of the whole system, and be able to show to your friends and the public that your opposition is neither from intolerance or ignorance.

In 1775, Father Hehl, a German philosopher, employed the loadstone, with passes for the cure of disease; but in 1780, a Monsieur Lanterbourg, a landscape painter, residing at Hammersmith, was impressed with the idea that he had a commission from above to cure diseases, but he despised both loadstone and passes, and his mode is graphically described by a friend of the patient, who was present:—The person had been lame for some years; "I know your complaint, sir," addressing, and looking steadfastly at the patient, "look at me, sir." They continued looking at each other for some minutes, and then M. Lanterbourg inquired if the patient did not feel some warmth about his loins? "I feel a warmth as if some person was pouring boiling water about my loins." M. Lanterbourg continued looking at his patient for about three minutes more, and then said—"How did you come here?"—"In a coach, sir." Then said M. Lanterbourg,—"Discharge your coach, and walk back;" which he did four miles!

Mesmer imitated Lanterbourg in dispensing with the loadstone, but continued the passes, alleging that he had discovered a new agent which he called "animal magnetism," and which he describes as:—"a fluid universally diffused, the vehicle of a mutual influence between the celestial bodies, the earth, and the bodies of animated beings: it is so continued as to admit of no vacuum; its stability does not admit of illustration; it is capable of receiving, pro-

pagating, and communicating all the impressions that are incident to motion; it is susceptible of flux and reflux. The animal body is subject to the effects of this agent, and these effects are immediately produced by the agent insinuating itself into the substance of the nerves."

"We particularly discover in the human body qualities analogous to those of the loadstone; we distinguish in it poles different and opposite."

"The action and the virtue of the animal magnetism are capable of being communicated from one body to another, animate or inanimate."

But even this is not necessary, as Dr. Elliotson reports that one of his patients could be made to magnetise herself.

"Though the fluid be universal, all animal bodies are not equally susceptible of it." "The animal magnetism is capable of immediately curing diseases of the nerves." "By means of it, the physician becomes acquainted with the state of health of each individual. . . ."

Mesmerists assert, that "their facts have been proved over and over again to the full satisfaction of men whose integrity and honour are unimpeachable, and who can have no motive to delude, or to be deluded." Admitting that the experiments have been witnessed over and over again by men of unimpeachable honour and integrity, the question still arises,—were those men possessed of a cool and deliberate judgment, and capable of separating the real from the ideal? Now, it is notorious,—we have only to recal the ample exposé made some years ago by Mr. Wakley,—that the proofs have signally failed, when tested properly; and none but the most unimpeachable evidence should be allowed.

Whatever the cause of the alleged effects of mesmerism may be, whether a fluid, a vapour, a mineral, as some allege the atmospheric air to be, no one alleges that Mesmer invented it; therefore it must have existed from the beginning, and its effects constantly operating; and therefore it is remarkable that none of its phenomena were witnessed till the last century. Moreover, all men, and animals also, ought to be equally susceptible, for we cannot suppose a difference to exist in the conducting power of bones, muscles, nerves, &c., &c., in different individuals (unless there be special organs, which may vary in power, as in the torpedo;) whereas it is known, that none show any of the effects until they have been educated in the effects.

This inevitable conclusion forces mesmerists to explain, why so few persons indicate the possession of the power, by presuming that the mesmeriser and the mesmerised must have full belief in the existence of the

power, and have a desire either to mesmerise, or be mesmerised; and, therefore, if a failure arises, it is from "*l'atmosphère d'incrédulité*." Now, if this be not a subterfuge, I know not what is!

As illustrations of the cases recorded by mesmerists, I shall give you the following:—"Chardel, a physician, mesmerised two sisters, with the hope of checking a tendency to consumption which they had evinced. One evening, being in sleep, wakening, they, as if prompted by a natural instinct, entreated their mesmeriser to leave them in that state, only so far demesmerising them as to enable them to open their eyes, and to be committed to their own self-guidance. Day after day they renewed their petition, for day after day they felt health returning under the mesmeric influence. In other respects they pursued their usual habits, and their mesmeric existence had its alternate periods of sleep and waking, as regular as those of their natural life. At the end of three months, their cure appearing to be complete, Monsieur Chardel conducted the sisters to a beautiful spot in the country, where he restored them to a knowledge of themselves. He describes, in lively terms, their surprise and joy on returning to consciousness. It was winter when they entered the mesmeric state, it was now spring; they were then looking forward to an early grave, but now, the feeling of renewed health, tinged with hope and life; almost doubting if they did not dream, they threw themselves into their mother's arms, gathered flowers, &c., to convince themselves that it was a blessed reality. Not a circumstance of the three past months survived in their memory."

Townshend again relates,—“They, the patients, turned round when I did, and inversely to myself; but my foot, when presented to them, seemed simply to repel them.” I tried this with the sister of Theodore: whenever I held out my foot she was repelled; and every time that I held out my hand she was attracted towards me; and by the alternate exercise of these two influences she was kept oscillating to and fro like the pendulum of a clock.” “By mesmerism we best dissect man, whether mentally or physically; and if ever the vital influences are to be understood, it is not by anatomising the dead, and by torturing the living, but by observation of our fellow beings when in the state we call mesmeric.”

“E. A. used to speak to me of a kind of vapour rising before his eyes during mesmerization. When questioned about this in sleep-waking, he declared that the vapour proceeded from me, and seemed to penetrate and pervade his frame. This he

asserted to be the effectual cause of the mesmeric sleep.”

Upon such evidence we are called upon to give assent to mesmerism! What can we think of those who promulgate, and those who yield to the belief, but that they are either enthusiasts, knaves, or fools? But it may be shown that the mesmeric phenomena may arise from other causes; and it is a maxim in physics, as also in logic, not to seek for hidden and occult causes when the effects produced can be explained by obvious and admitted agents. Mr. Baird, of Manchester, has clearly proved “that the ordinary phenomena of mesmerism may be realized through the subjective or personal mental and physical acts of the patient alone.”

Sleep or torpor, with more or less muscular rigidity and loss of sensation, is not an unusual thing to be seen in medical practice, as in “catalepsy,” “hysteria,” &c. &c.; and, indeed, we may have an exaltation of any one of the senses without seeking for an occult cause. We know that a monotonous action on the visual organ, just as a monotonous sound on the aural organ, will induce sleep. In what does this differ from ordinary sleep, or in what does the cataleptic state differ from the mesmeric?

Again, until it is certain, which at present it by no means is, that distinct fibres of the brain are devoted to special mental demonstrations, how can we believe in phreno-mesmerism? There are two points which must be proved before the mesmerist can advance one step in the proof of clairvoyance,—viz., 1. That the eye is not necessary to vision; 2. That there is a “medium of mesmeric sensation.”

How does Mr. Townshend proceed to establish those points? He says,—“Remember that the connection between seeing and the picture on the retina has never been proved. We only know that there is a picture on the retina because we are able to see.” “Can that, then,” he asks, “be itself the cause of our seeing?” He adds, “The absurdity is manifest.”

In reply to No. 1, I would say, it requires no proof, because we take this belief as a first principle. We can no more logically prove that “we live.” 2dly. Our knowing that there is a picture on the retina is certainly not the cause of our seeing it; but its being there causes us to know that it is there—ergo, to see it.

As regards the “mesmeric medium,” Mr. Townshend goes on to say,—“What is the medium we know not; and therefore all that remains for us in our ignorance to do is to gather as much information concerning it as we can. I, therefore, by parity of

reasoning, may be allowed, from other effects, to infer the existence of a 'mesmeric medium.'

"It is not in any case the eye, but the medium which penetrates the obstacle. The impulsion on the optic nerve is the cause of vision; and if we can find a medium to transmit that impulsion, athwart whatever impediments, vision will take place."

"That which I have now unequivocally to affirm of the 'mesmeric medium' is, that it is primarily set in motion by the human mind." In another place he says, "Admit that thought communicates action to surrounding media; admit that the mesmerised are sensible to that action, and all that may seem wondrous in my statement vanishes."

It is not easy to grapple with such loose statements and assumptions: but we must say that their reception would lead us to the belief that *thought* can put into action the "mesmeric medium," because "it is not necessary for the mesmeriser to have the object before him; for if he merely suggests to his mind, this suggestion can be conveyed, through the 'mesmeric medium,' to the mind of the mesmerised." We have, therefore, a motion created without muscular contraction; or, in other words, power generated by nothing.

If we admit clairvoyance to be a fact,—viz., that we can see without eyes,—we cannot escape the conclusion that we may hear, smell, taste, and feel, without their respective organs,—which would bring us to admit an existence without existence; for we have no knowledge of life without our present senses. We admit that it is not the eye, *per se*, or the ear, *per se*, which sees and hears; but we deny that the "thalami" or "corpora quadrigemina" on the one part, or the floor of the fourth ventricle on the other part (those portions of the brain in which we conceive those senses to reside), could see or hear without the aid of the organs of vision and sound: however willingly we admit that the Power which created us might have willed us to see by our ears, and hear by our eyes, or hear and see without either.

I cannot leave this subject without adverting to the direct evils which may arise to those parties generally predisposed to nervous diseases, in whom are provoked and stimulated physical as well as moral disturbances. I also denounce the impiety which pervades many of the passages in the writings of mesmerists.

Hydropathy, the last of the list, has been within a few years dignified with the appellation of a science, and foisted upon the ever-credulous public.

Observe, I limit my assertion to the system said to have originated with a Silesian peasant, and afterwards brought into notice in England, chiefly by the writings of half-pay captains and briefless barristers.

I, and you also, hold in high estimation the beneficial effects to health of cleanliness, regular and abstemious habits, and absence from business, amid a fine locality; being fully sensible of the physical as well as moral demoralization arising from the opposite circumstances.

We all know it to be essential to health, that the functions of the skin be performed, and the proper use of water is essential for this purpose; and we also know that water when properly applied becomes in many diseases a powerful medicinal agent. This has been fully shown by Lanzani in 1700; by Dr. Jackson at the end of last century; by Dr. Currie, and Sir George Magrath in 1808; and many others, including myself.

Hippocrates* fully understood the benefit arising from the use of water. In his book on the "use of liquids," while speaking of the regimen fit for acute diseases, his observations on the water and the bath are such as would be worthy of the most enlightened modern physician. Also Al-bacasis, a skilful Arabian physician of the 13th century, treated small-pox and other diseases upon the cold water plan. Some of his patients, it is reported, who relished the practice, swallowed the "limpid beverage" in quantities that would put to the blush the most unrabid votary of hydropathy.

I have thought it right to draw your attention to those disturbing causes which exist in the practice of medicine. I ought to have classed with them, however, the Chrono-thermalists, Morisonians, Hollowayans, Father Parr, Kinesipathists, "et hoc genus omne,"—but you will very easily determine in your own minds their relative merits. How the human mind can receive and entertain absurdities and inconsistencies which really ignore all common sense, is a mystery which metaphysicians may solve, but an ordinary mortal like myself can only wonder and pity!

By a general survey you will find that homeopathy is no more than what, in change of air, diet, and exercise, has been practised by legitimate practitioners from the days of Hippocrates, as you will discard entirely from consideration the doctrine of infinitesimal doses: neither can hydropathy claim any novelty, save and except the extravagant pretensions of its modern de-

* Hippocrates, Adams's Trans. vol. i. p. p. 106, 303.

luders, and deluded. And in what do the phenomena of mesmerism differ from the powers of the imagination and moral causes acting upon the different individuals, healthy or diseased? In short, the "onus probandi" is upon the mesmerists to show in what does mesmerism with all its mysteries differ from the ordinary performances of any scientific conjuror.

Gentlemen, from whom are we to expect a remedy for the glaring evils of quackery—the profession, the government, or the public? We are met with coldness by many of the profession, indifference by government, disbelief by the public as to the purity of our intentions.

Those medical men are indifferent, because they think that quackery should be left to silent contempt, and that it will disappear before the increasing knowledge of the people. A vain expectation! The argument is bad, because we know that the most staunch abettors, the most devoted and willing slaves to quackery, are persons who have had all the advantages of a liberal education; and we cannot assume that the same cause, viz. *education*, operating upon a different grade of society, will produce opposite results. Others have wittily argued for the letting quackery alone, because its effects are a real good of the profession, inasmuch as "it cuts out work for the regular man."

As to Government, it must ultimately interfere to prevent the shameful advertisements, the disgrace of the age, of pretended nostrums, by which a superstitious dread of certain diseases is fostered, and a vast amount of unnecessary unhappiness induced.—But as to Government doing *more*, I cannot see how? No law can be enacted to force a man to go out, or to hinder him from going out of the world, in the way that to him seemeth most fit! Bad and often injurious in its operations as the law may be as respects quackery, it was wisely intended to protect legitimate medical men from an unfair charge of manslaughter: but its provisions render it most difficult to touch even the most dangerous quacks.

It is necessary that ignorance and negligence be proved, even in the most flagrant cases, before a charge of malapraxis can be sustained. This is difficult to do at all times, and one might conclude that the presiding judge sometimes favoured the quack, as, in a recent case, he is reported to have said "it would be very hard indeed upon a medical man, or any other person, if because the patient he was attending died, he was to be subjected to a charge of man-slaughter." The *any other person* might be a Coffinite, and therefore, according to this reading of the law, the quack is as much

protected as the legitimate man. So much for the benefit we may expect from the law!

As to the public, we need not look to them for help, having before us the mortifying spectacle of the most gifted men offering themselves victims to such monstrous errors and absurdities which really ignore all common sense, and a belief in which would disgrace the intellect of the most illiterate peasant, or the wandering savage: at least the latter, if he did yield belief, would attribute the effects to the influence of his god, and not, like the nobles of our land, and alas! also many of the clergy, to the alleged mysterious discoveries of some fool or impostor.

That quackery is no new evil, we have the evidence of the younger Pliny, who writes:—"Of all the arts, medicine is the only one, of which *any one* may boast a knowledge, and have immediately ready listeners. There is, however, no set of impostors to be more feared than those who falsely assume the character of physicians. There is, notwithstanding, no law to punish so serious a deception. Those impostors instruct themselves at our expense—their experience is gained at the price of our lives, and under the cloak of legitimate medicine they have the privilege of murdering with impunity."

If this remarkable passage, written nearly 1800 years ago, had been penned this very day, it could not have been more truthful or more applicable to the present posture of medical affairs.

Pity it is that Pliny has not handed down, by his masterly pen, an account of the means used by those "murdering impostors," otherwise Hahnemann, Preissnitz, Mesmer, Morison, Holloway, Coffin, Dickson, and others, might be deprived of the inglorious credit of being the originators of their several heresies and fallacies!

We see, therefore, that quackery has existed, and I believe will continue to exist, in some shape or other, and, therefore, medical men, instead of "sitting with folded hands," must be up and doing, each in his own day and generation fighting his own battle. How and when it is to be fought I cannot enter upon, but, to those of our time, it will be a hard struggle; for the enemy has been, by our supineness, allowed to establish a lodgement in the camp.

"Oh! bright abodes! Oh glorious Troy, the labour of the gods! Thrice stopp'd unmoved, the monster in the gate, And clashing arms; thrice warned us of our fate; But we, by madness blinded, and overcome, Lodge the dire monster in our sacred Dome!"*

But let us rejoice; for while medicine, although it has to contend against igno-

* The Æneid, Book 2d, line 325. Pitt's Trans.

rance from without, and cunning from within, is being gradually moulded into a permanent and beautiful structure, proportioned in all its parts, slow but sure in progress, quackery still retains the same foul, shapeless, headless trunk, embracing acalephæ-like—the deluded victims with its slimy arms. Therefore, be undaunted! “Magna est veritas et prævalebit! Cast down and destroy with unsparing hand those harpies who prey on human flesh! Uproot them like the weeds and thistle, which suffocate the healthy grain! Say in the words of the poet—

“Base sordid monster, mercenary slave,
Thou church-yard pimp, and pander to the grave,
Death's busy factor, son of desolation!
Thy country's curse! and grievance of the
nation!”

* * * * *
“No beams of soft'ning pity touch thy breast,
Too vile a cell to harbour such a guest.”

Returning like a victorious general, from this onslaught on quackery, you proceed to restore the order and beauty laid waste by ruthless and unscrupulous invaders. You survey the glorious temple of medicine, and look with feelings of pride and admiration upon the emblazoned and still uninjured names of the medical sages from Hippocrates downwards to your own countrymen,—Harvey, Jenner, Sydenham! and you marvel at the boldness of the men who dared to invest your sacred walls; but you marvel still more at the army of fools enlisted in such a cause.

Contemptuously disregard the taunts and aspersions cast upon you, by men who, in elevating their own wretched and ephemeral quackery, try to depress you. But, confess to be indignant at truth being cast from its pedestal, and error, like “the molten calf,” worshipped on its sacred site. Confess that you are indignant that educated men should be discredited, and ignorant men believed. Confess to be disgusted at the too common spectacle of a father or a mother displacing the friend and medical attendant of perhaps a quarter of a century, and placing in his once honoured, now dishonoured seat, some designing quack; for whom they will make any efforts to establish a character for skill and talent, and indeed work in his service as if it were a most righteous cause. Let these difficulties and discouragements—very disgusting though they be—stimulate you to increased exertions! Each of you may individually, most certainly collectively, advance the progress of medicine, and assist in giving to it that place in science to which it is entitled, and ultimately must attain.

A master-mind may yet arise,—even one of you,—qualified to grasp and generalize on the mass of isolated and disjointed

facts; and although in the words of an eloquent writer,*—“We do not believe our art is perfect, or that a medical man can, like a god, work infallible cures,—that certainly is not given to our limited faculties, and probably never will be. But, we do in sickness all that human aid can do. We cultivate medical science as all other sciences are cultivated, according to the rules laid down by Bacon, by observation and experience.”

Gentlemen, animated by the fine sentiment contained in the foregoing quotation, you may attain fame and wealth, but, what is better still, most assuredly you will have the satisfaction of knowing that in your day and generation you helped to add beauty and permanency to your adopted labour—“The Ars Divina.”

CHARITABLE INSTITUTIONS IN FRANCE.

THERE exist in France 1,133 administrations of hospitals and benevolent institutions established in 1,130 communes. The departments which have the greatest number are the Vaucluse, Var, Haut-Rhin, Nord, Seine-et-Oise, and Bouches-du-Rhône; those which have the fewest are the Seine, the Hautes-Alpes, Corsica, the Hautes-Pyrénées, the Haute-Saône, and the Tarn. The department of the Seine has only two hospital administrations, but one of them—that of Paris—is so considerable from the immense revenues at its disposal, by the number of establishments which it directs, and by the number of poor which it assists, that it reckons for a fifth part of the hospital assistance given in the whole of France. From 1800 to 1845 the amount of donations and legacies officially made to the poor was not less than 122,000,000f., exclusive of sums given direct and authorized by the prefects. The venal value of the productive estates of the hospitals and almshouses is estimated at 500,000,000f. They have also large revenues derived from other sources, such as the duties on the receipts of the theatres, grants from the communes, &c. The most considerable revenues of the hospital administrations are those of Paris, which are about 12,690,823f.; of Lyons, 2,279,990f.; of Rouen, 1,136,908f.; and of Marseilles, 1,069,257f. The food of the poor stands for a sum of 22,191,141f., of which the charge for wheat or bread is nearly one-half. The number of beds in the hospitals and almshouses in France is 126,142, of which there are 15,353 in the department of the Seine. The number of patients in the hospitals in 1847 was 486,083, and in the almshouses 77,053.

* Ed. Medical Times, 2d November, p. 461.

Original Communications.

DR. RAMSBOTHAM'S REPORT OF
CASESTHAT OCCURRED IN THE EASTERN
DISTRICT OF THE

ROYAL MATERNITY CHARITY.

[Continued from page 750.]

DURING the year 1849, there were delivered in the eastern district of the Royal Maternity Charity, under the superintendence of Dr. F. H. Ramsbotham,

2141 women—of which cases

24 were twins—one in about every 89.2 cases; of these, in 14 cases both heads presented; in 7 the presentations were head and breech, or inferior extremities; in 1 both were breech; and in 2 cases one presented with the head, and the other transversely. In 13 of these cases the children were both boys; in 9 both girls; and in 2 one girl and one boy.

1154 children were males.

1011 children were females.

2106 were presentations of some part of the head; of which 3 were face presentations—or one in every 762 births.

46 were presentations of the breech or some part of the lower extremities—one in about every 47 cases; of these, 9 were twins.

13 were transverse presentations—one in every 166.5 cases; of these, 2 were each a twin, and 1 of them was expelled doubled. Of the rest, 1 was at seven months, and the others at full time; and in all the cases the operation of turning was had recourse to: 1 of them was the woman's ninth child, and in all her labours the foetus had presented transversely.

In 3 the placenta was entirely, and in 1 partially implanted over the os uteri—one in every 535.25 cases. In the instances where the os uteri was completely covered by the placenta the children were turned; all the women suffered considerable loss of blood, and 1 of them died three hours after delivery: where the placenta was partially over the mouth, the membranes were ruptured artificially, the flooding ceased, and the foetus was expelled by the

natural efforts. All the children were still-born.

8 were complicated with dangerous hæmorrhage before delivery—not the result of placental presentation; one in every 267.6 cases. In all these cases the children were born naturally, after the artificial rupture of the membranes—3 living, 6 dead (two of them being twins). One of the mothers died 14 days after delivery.

In 9 cases the placenta was retained within the uterus, either by atony or irregular contraction of the uterine fibres, or by morbid adhesion between the placental and uterine surfaces, so as to require the introduction of the hand for the purpose of removal—one in every 237.9 cases. With all these there was more or less hæmorrhage; 1 of them was a breech case at eight months, the flooding was very profuse, and the women died six days after delivery.

8 were complicated with alarming hæmorrhage after the natural expulsion of the placenta—one in about every 267.6 cases. In all of them the bleeding was controlled, and the women recovered.

3 women were delivered by craniotomy—one in every 713.6 cases. The first of them under puerperal convulsions, the pelvis being small; the second patient also had a contracted pelvis, and the foetus was dead from prolapsed funis; in the third case the labour had been very protracted from distortion of the pelvis. All the women recovered.

1 was delivered by the long forceps, of a very large living child.

4 were delivered by the short forceps—one in every 535.2 cases. Of these, 1 was a first labour in a woman 36 years old, with much rigidity of the soft parts; the hands of the child presented with the head; in 1 the mother was at the point of death from Asiatic cholera; 1 was a case of small pelvis; the other a first child with much rigidity.

In 1 premature labour was induced in consequence of contraction of the pelvic brim, by the exhibition of the ergot, without any other means having been had recourse to.

1 was complicated with puerperal convulsions before the birth of the child, which terminated upon delivery by craniotomy, and the woman recovered.

7 women died within the puerperal month, or from puerperal causes—one in about every 306 cases; 3, however, only as a consequence of labour, or 1 in 713·6 cases; for 2 died of cholera, at that time raging; 1 of chronic bronchitis, and 1 of fever. 2077 children were born living 88 were still-born—being 1 in about every 24·6 births.

Of the Deaths,

1 was from chronic bronchitis, a week after delivery.

1 was from typhus fever. The woman had had erysipelas of the thigh, with subsequent abscess, and was getting better when fever broke out in the house: 3 of her children died of it, and then she herself, on the 12th day after labour.

2 were from Asiatic cholera—1 a quarter of an hour, the other three days after delivery.

3 were from loss of blood, occasioned in the first case by placental presentation, the woman living only three hours after delivery; in the second by accidental hæmorrhage, the woman living 14 days; and the third by retained placenta, the woman living 6 days.

Of the still-born children,

22 were premature: of these 10 were putrid.

11 were putrid at full time, or nearly so.

17 were breech presentations: of these 2 were premature; 2 were putrid; 4 were premature and putrid; and with 1 the funis prolapsed.

11 were transverse presentations, 1 of them being premature.

3 were delivered by craniotomy.

1 was delivered by the short forceps.

3 were under entire placental presentation.

1 was under partial placental presentation.

6 were after dangerous accidental hæmorrhage.

3 were under lingering labour.

1 was hydrocephalic, combined with spina bifida.

1 was after an accident to the mother.

1 was the second of twins.

With 2 the funis prolapsed by the side of the head.

With 2 the mothers were dying of cholera.

With 1 the mother was dying of bronchitis.

2 were at full time, or nearly so; head presenting, not putrid, nor delivered by art.

In the last number of the MEDICAL GAZETTE I remarked on the large number of women who died of "puerperal fever" in the year 1848, and mentioned that in that year the cholera was very prevalent in the eastern parts of London. Here, however, I fell into a mistake. The cholera was ravaging a large part of the continent in this year, but only showed itself in London towards the end of September. A reference to the tables of the Registrar-General, however, will show that *zymotic diseases* were very fatal throughout the whole of 1848; in every week the proportion of deaths from these maladies was very much greater than the average, amounting in no few instances to nearly double; and the chief of these were scarlatina, typhus, and influenza. It was the succeeding year, 1849, when the cholera proved so fatal with us. In the report, indeed, presented to the Houses of Parliament by the General Board of Health, it is stated that "in London there had been during the five years preceding [1849] a progressive increase in the whole class of zymotic diseases, the mortality from typhus exceeding, by several hundred deaths, the mortality of any preceding year. The deaths from scarlet fever, also, were greatly above the average; and such was the mortality from influenza; that, in 1847 and 1848, almost as many, at the earlier periods of life, perished by this disease as by the terrible epidemic that followed it." "These circumstances indicated an epidemic force extending over the metropolis and steadily increasing" (pp. 9, 10). Puerperal patients felt the power of this "epidemic force" in 1848 almost in a greater degree than any other persons.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 30th October, 1851:—Charles Edward Bowman Danson, Pocklington, York—Edwin Josiah Miles, Gillingham, Dorset—William Boyle Chavasse, Birmingham—Richard Nugent, Antigua—William Owen, Llanfair, Montgomeryshire.

CONTRIBUTIONS TO PATHOLOGY.*

BY FRANK RENAUD, M.D.,

Manchester.

CASE OF STRICTURE OF THE LOWER PART OF THE ILEUM FROM TWO BRIDLES OF LYMPH.

SARAH A. SHORE, 21 years of age, and a single woman, was exposed to cold ten days previously to her death. This exposure was followed by pains in the abdomen and constipation. Five days from this, sickness and tympanitic distension of the bowels came on. Over the umbilical region there was slight pain on pressure. Pulse 104. In two more days stercoraceous vomitings ensued, and continued with more or less intensity, until she gradually became comatose and died.

For the last seven days of this young woman's illness everything in the way of treatment that could be devised was resorted to, but without producing any result. If medicines did not aggravate the symptoms, they certainly proved quite ineffectual to remove them.

From her own account, she had enjoyed good health up to the time of the seizure which ended her existence.

At a post-mortem examination, the abdomen was seen much increased in size from accumulation of solid matters and flatus. There was not any effusion of recent lymph, and but trifling injection of the vessels. The great omentum adhered firmly to the uterus and its appendages, and to the viscera in the pelvis, by numerous firm bands of lymph of old standing. In the right iliac fossa two bands of lymph stretched from the peritoneal surface lining the abdominal walls to the peritoneum covering the ileum, about three inches from the termination of this bowel in the colon. By a contraction of these bands the gut was so far twisted upon itself as to produce a complete stricture—so complete, indeed, that not a drop of water would pass through, even when the bands of lymph had been severed. The long continued traction had caused a distinct narrowing in the calibre of the gut, which had ended

in permanent canalicular obliteration. In this respect the case may be considered a very rare one, and withal instructive, as showing that, although an operation during life may, in the majority of instances, succeed in liberating the gut from its incarcerating band, yet that in every instance such a result is not necessarily associated with integrity of the calibre of the gut itself.

In connection, also, with this case, and with cases of a similar nature, pathological anatomy seems to justify a conclusion not hitherto, I believe, fairly put before the profession—viz. that, although internal strangulations or incarcerations of bowel are common to both sexes, yet that the great majority of them happen in women; or, to put the case in other terms, the animal economy in females furnishes an exclusive source of disease to which, from a difference in organisation, males are not, neither can be liable; that, although the result in each sex is the same, yet that the elements of the disease are differently sown, and brought to a culminating point by a train of morbid phenomena that admits of no parallelism. In males, where the strangulating bridles consist of lymph, they must be referred back, for their origin, to one or more *idiopathic* attacks of peritonitis of greater or less intensity. In females, on the contrary, I think my own experience in pathological anatomy, and a perusal of the cases recorded by others, justifies the conclusion that the peritonitis arises in many instances out of a chronic form of congestive irritation to which the generative apparatus within the abdomen is liable. That this long continued irritation, as manifested directly by pain and throbbing in the region of the ovaries and uterus, and indirectly by lumbar irritation, dysmenorrhœa, crural pains, &c., does frequently advance to local inflammatory action, is sufficiently evident from the bands of lymph that are so frequently seen matting the ovaries, broad ligaments, and oviducts together. If, therefore, folds of bowel or portions of omentum are in contiguous relationship with parts influenced by these morbid actions, it is not contrary to rational pathology to infer that they will partake in a limited degree of the same actions; and, a bond of union being thus morbidly constituted, it only requires time, and the peristaltic action

* The morbid anatomy connected with these cases is reserved in the Museum of the Manchester Royal Infirmary.

of the bowels, to elongate the lymph into a band which, under accidental circumstances, may prove an incarcerating medium.

If these premises be allowed, it follows that females have a liability to internal incarceration of bowel, borne out by both pathology and anatomy, over and above that to which males can be the subjects. In the case of C. Cain,* mentioned in these reports as having died from apoplexy, and having had aneurism of the left ventricle, bands of old lymph were found freely passing from the uterine organs to different parts of the bowels. In another instance, where two-thirds of the ileum were constricted between two bands of lymph, the origin was at the rectum, immediately behind the uterus. That such persons can only have suffered from what is commonly recognised as uterine irritation, seems clear, from the fact of assertions being over and again made that, up to a certain point, no suspicion of inflammation has been harboured, and no adequate treatment been adopted for its subdual.

ANEURISM OF THE ARCH OF THE AORTA— ARTERITIS—GANGRENE OF RIGHT LEG, &c.

A MAN, aged about 43 years, by occupation a navigator, in his usual health, was walking one morning to his work, when on a sudden he felt a pain in the knee of such severity as to cause him to turn back home. He accomplished this journey with difficulty, as the leg became numb and very cold. In an attempt to warm the limb he burned and blistered it in two or three places; yet no pain was felt, neither heat communicated. Two days afterwards he came into the Manchester Royal Infirmary. He appeared to respire with some little difficulty, and had a chronic cough. The leg was œdematous, and passing into a state of gangrene. Three days afterwards the limb was black, and quite gangrenous; delirium came on, and continued until his death, which took place 14 days after the first occurrence of the symptoms.

Post mortem.—Sub-arachnoid cellular tissue infiltrated with serum, and a moderate effusion into the ventricles of the brain. Lungs partially œdematous.

Heart healthy; aneurism of the aorta at the crown of the arch, and immediately in front of, and pressing upon the trachea. The size of the aneurismal tumour that of a small apple, and about one-third filled with laminated coagula. Atheroma of the aorta throughout its entire length. Iliac arteries free from deposit. The profunda femoris plugged with lymph at its origin; the plug about one inch in length, and terminating in a pencilled point at its distal extremity. The femoral artery free. A little below the popliteal space the artery was inflamed, of a deep red colour, and plugged with lymph. This plug was about an inch and a half in length, and terminated in the same pencilled way as already described above. The cellular tissue around was sloughy, and a small patch of lymph was found in the contiguous vein. The morbid appearances in the leg were those generally found in gangrene.

The presence and position of the aneurism sufficiently account for the dyspnoea, &c.

The sudden manner in which the arteritis was ushered in is not so readily explained. It may possibly have arisen from a small coagulum, or coagula, having become detached from the walls of the aneurism, which would then be washed down by the current of blood as far as the arterial divisions already named. Here it may have acted as a foreign body, and, partly by obstructing the circulation, and in part by exciting inflammation in a part already predisposed to irregular action, have caused spontaneous gangrene of which the man died.

CASE OF MALIGNANT POLYPUS, SPRINGING FROM THE POSTERIOR PART OF THE PALATE.

THIS disease occurred in a boy 15 years of age, and first appeared as an enlargement in the back part of the mouth, which continued to grow, until, at the end of six months, it blocked up the pharynx, and pushed itself forward towards the front of the mouth. When he was admitted into the infirmary, the tumour was so large and closely impacted that the origin could not be detected. As much of it as practicable was excised, for the purpose of relieving urgent symptoms of suffocation, and

* Vide MEDICAL GAZETTE of last week.

the operation gave great relief. The tumour, however, grew again rapidly, and in less than a month, was larger than before, so that he could scarce swallow a teaspoonful of fluid. A second operation was determined on; but, in a suffocative fit, the boy died. There was perfect freedom from pain when the parts around were quiescent.

A post mortem examination revealed a lobulated and pale salmon-coloured tumour, which had two attachments—the one, not so broad as a shilling, from the posterior part of the right palate bone, and the second from the pterygoid process of the sphenoid bone. It was curled over upon its principal base, and so occupied the posterior part of the floor of the nostrils, and also the greater part of the mouth. It then descended into the pharynx for nearly four inches. Thus, though this tumour or polypus may originally have been pediculated, it was now sessile, from all the lobes being compressed so as to adapt themselves to the containing parts. On submitting a portion, cut from the centre, to microscopic examination, it was found to be made up of compound cells, either rounded, oval, or caudate, each cell having from two to four nucleolated nuclei. Tesselated epithelium existed in abundance on the surfaces. To unassisted vision the tumour had all the appearances of malignancy, being homogeneous in texture, and internally of a pale cream colour.

Although malignant polypi springing from the palate are recognised, they are yet sufficiently rare to render any apology for the publication of this example unnecessary.

CASE OF INCISED WOUND OF THE RIGHT VENTRICLE OF THE HEART.

On Sunday morning, the 9th of November, 1849, a man and his wife were quarrelling in a cellar beneath a beer-house in Manchester. The husband beat his wife, on which she screamed "Murder!" and so attracted the attention of some persons who were drinking in the house above. One of them remonstrated with the man, on which he ran back into the cellar, and returned with a knife or chisel. On being again called in question for his misconduct, he rushed forward and pushed the weapon into the left side of his adversary's chest, between the seventh and

eighth ribs, and so inflicted an oblique wound, about three-quarters of an inch in length. Some by-standers advised the immediate removal of the wounded man to the infirmary. He answered that he was not seriously injured. He, however, consented to go, and walked a distance of thirty-five yards, when he tottered and fell, and was carried the rest of the way. On arrival, he was in a state of pulselessness and collapse. Brandy and opium partially served to restore the vital powers; and, during the four hours he lived, he spoke twice—on one occasion to complain of severe pain in the chest.

At a post-mortem examination, the wound, after grazing the diaphragm and costal cartilage, was found to have penetrated the apex of the right ventricle of the heart, passing entirely through its walls. The pericardium was greatly distended with serum and coagulated blood. The wound in the muscular wall of the heart was oblique, so that the blood had escaped during successive contractions of the organ, as through a valvular opening. Its dimensions corresponded very closely with the integumentary incision.

The principal points of interest in this case seem to lie in the circumstance that, after so grave a lesion, so great a distance should have been walked; and that at the first so little shock to the system should have been experienced. In a medico-legal point of view, both these facts have their value.

ESSAY ON

MENSTRUATION

IN SOME OF ITS PHYSIOLOGICAL AND PATHOLOGICAL RELATIONS.

BY ADOLPHUS HANNOVER, M.D.,
Of the University of Copenhagen.

[Translated by Edmund Hansen.]

[Continued from page 632.]

PART II.

BEFORE proceeding further I would make a few remarks upon the *duplicity* of the ovaries. It is known that the left ovary is larger than the right in several animals; and even that one ovary may become atrophied and entirely deprived of its functions.

In woman nothing of this kind occurs; and I concur with Hüsckke, who states that he has not been able to detect any difference in their sizes. Neither does it appear from the observations of corpora lutea, either after pregnancy or otherwise, that these bodies are found more frequently in the ovary of one side than the other. There is no evidence to lead to the supposition that the ovary of either side is specially appropriated to the production of offspring of either sex particularly—a circumstance which harmonises with the sexual indifference of the genitals at the time of their first appearance. The two following cases may serve to prove that each ovary is not appropriated to its own sex:—A woman, twenty-three years of age, a primipara, was delivered of *twins, both female*, on the 7th of Dec., and died of metritis on the 15th of Dec., 1842. A corpus luteum was found in each ovary. Another woman, who died on the 3d Dec., 1841, immediately after having given birth to male twins, presented also a corpus luteum in each ovary. These cases afford proof that twin births do not always result from the discharge of both ova from the same vesicle, as has frequently been found.

The manner in which the discharge of blood occurs in the lower animals induces us to regard it as a secondary phenomenon in this uterine function. Although a much more prominent symptom in women, it also shows it to be an occurrence of inferior importance. This is the case both with regard to individuals, and to man regarded in a state opposite to that of nature. Thus Brierre de Boismont has shown that menstruation appears later in girls of lymphatic temperament than in those of the sanguineous temperament; later in delicate than in robust healthy girls; later in fair, large women than in dark small women.*

We must here, however, as in the subsequent remarks, bear in mind the connection between the appearance of menstrual discharge and the commencement of puberty. It is sufficiently known that the period of menstruation is subject to the control of external circumstances. In southern countries,

and near the Equator, the function occurs early, coinciding with early puberty and early sterility. Whether this variation be attributable to the heat of the climate or to differences peculiar to varieties of race cannot yet be determined. Menstruation commences later in mountainous regions than in valleys; later in the country, and in women of the lower orders, and who are compelled to work hard, than in those who live in towns, or, being of the higher classes, lead an indolent effeminate life. Education, the state of health, and the hereditary constitution, marriage, &c., are points of no small importance to this matter. It is, therefore, perhaps not without reason that Pouchet considers that menstruation has always occurred to women, but that civilisation has greatly increased its frequency. We may add that menstruation is subject to considerable variety in different individuals, with regard to the number of days that it lasts, the length of the intervals of its occurrence, the age at which it ceases, and with regard to which uterine life is active. Although an average time may be stated, there will still be found great variations as to the regularity or irregularity of menstruation in whole nations as well as in individuals. The amount of blood lost varies at different times in the same individuals. The quantity is said to be greater nearer the Equator, but it is very difficult to arrive at any certain knowledge on this point. It is, however, certain that the discharge of blood is augmented by hard work, motion, and stimulating food, that it differs according to differences of the constitution, and at different periods of the twenty-four hours,* perhaps also with the seasons of the year. I have heard women in the hospital remark that their menstrual discharge had been diminished during their stay therein. The physicians of other hospitals have also

* The results obtained by my friend Dr. Karn, respecting the time of menstruation in Denmark, have been communicated by Dr. Tilt to the Edinburgh Monthly Journal, October 1850.

* The time of day at which menstruation commences is different. I found that, out of forty-four women, it began with twenty-three in the morning; with three in the day-time; with five in the evening; with thirteen in the night. Oslander also states that menstruation (and pollution) occur most frequently in the morning. Brierre de Boismont found that, out of a hundred and ninety-five women, menstruation appeared with forty-six in the morning; with a hundred and ten in the day-time; with ten in the evening; with eighty-nine in the night-time. That the sum total is smaller than the sums of the four periods is owing to the circumstance that some of the cases have been counted twice.

noticed the same fact. Pidons states that nuns menstruate irregularly. Desormeaux also states that the discharge is decreased or suppressed in peasant girls arriving at Paris for the first time. The same thing has been observed in girls sent to boarding-schools.

The discharge of blood proves to be of minor importance compared with conception and pregnancy. This may be seen from those cases in which, instead of the discharge from the uterus, a vicarious flow of blood has taken place from some other part of the body, pregnancy having followed notwithstanding. Such cases show that a menstrual flow of blood is not absolutely necessary for conception. There are also instances of the occurrence of menstruation, the uterus being absent and the tubes obstructed; whereas scarcely any case exists where menstruation occurred, both ovaries being affected.

Although the menstrual discharge of blood is undoubtedly one of the most certain proofs of the commencement of puberty, there have been instances of children who have menstruated at much earlier periods, as there are also of women in whom the discharge has appeared very much after the usual time. In both classes of cases corpora lutea have been found, although only exceptionally. (The cases in which the rudiments of other fetuses have been found in the ovaries of children are generally to be regarded as examples of superfetation.)

Menstruation during pregnancy calls for notice here. Instances are known of women who have not menstruated except when pregnant. The source of the blood in these cases is, however, uncertain. Generally, the regularity of menstruation has a direct relation to fertility; and if in many cases absence of menstruation is attended by sterility, there are nevertheless, on the one hand, numerous instances of regular menstruation with sterility; and, on the other hand, perhaps more numerous, of irregular menstruation with fertility. The cases are most interesting of women who have given birth to children without ever having menstruated, or only after repeated labours. Several instances of this kind are on record, and to these I can add the following, which is the more interesting because the organs of generation were found perfectly normal after death:—

M. N., thirty-six years old, was married at the age of fourteen, had never menstruated, nor experienced any of the prodroma of menstruation. She gave birth to four healthy children: the first was born in the twenty-third year of her age. Her labours had been easy; the lochial discharge natural, and had continued for three weeks after delivery. The patient died, in April 1848, of pleuritis and peritonitis. The uterus was of the natural size and form, but its fundus lay backwards, and its anterior lip protruded. The tubes and fimbriæ were natural. The ovaries were small, wrinkled externally, and presented numerous cicatrices. In the left ovary was one plain dark-coloured scar, and two small fibrous bodies the size of large peas. The capsule of the ovary was thick; nothing remarkable was observed in the interior; several Graafian vesicles containing a clear fluid were visible.

I have endeavoured in another manner to ascertain the importance of the menstrual flow, at the same time inquiring whether the rule followed by medical men of discontinuing the use of medicine during the flow arises from an old prejudice or be founded in truth. For this purpose I noted the menstruation sixty times in fifty-five women who were patients in the Frederick's Hospital. Although small, this number will be sufficient to enable us to draw some conclusions. The number might have been increased by a prolonged examination; but in the course of this, several difficulties arose which restricted the number of observations. In the first place, there were women to be selected who menstruated with uniform regularity, as was the case with all but seven, five of whom will be separately pointed out. Where this regularity was disturbed by the medicines exhibited, it was of importance to be assured that the disturbance was the result of the medicine, and not accidental. Secondly, on account of the novelty of the experiments it was necessary to take into account the possibility of producing such a disturbance of the health of the patients as it might be difficult afterwards to remove. I hope it will be believed that on this point I have taken the greatest possible care. Those patients whose disease was of a serious or acute character could not be made the subjects of observation. Many observations also were rendered useless from its having become requisite

to discontinue the use of the medicines, for fear of injuring the health of the patient. Finally, the nature of the medicines used has limited the number of observations, since I made it a point to exhibit those medicines that are generally regarded as powerful, or at least powerful for the time or the disease in which they were administered. For the above reasons it will be obvious that the number of observations made, even in the course of a year, would not be great, although in that space of time about a thousand female patients pass through the hospital. Many of this number must, however, be deducted as not being of the menstruating age.

Before detailing these observations, I may premise, with reference to the menstruation generally of these patients, that two-thirds were from twenty to twenty-eight years of age. This average is much higher than that of my friend Dr. Karn, and only shows that the average cannot be obtained from so small a number. In two-thirds of the number, menstruation commenced between fourteen and eighteen years of age. The earliest age was ten, the latest twenty-three years. Five women had given birth to one or more children. Two were married, but childless.

The ages at which menstruation commenced may be seen from the following table:—

| Age. | No. of Cases. |
|--------------------|---------------|
| 10 years | 1 |
| 12 " | 2 |
| 13 " | 1 |
| 14 " | 8 |
| 15 " | 9 |
| 16 " | 6 |
| 17 " | 6 |
| 18 " | 8 |
| 19 " | 2 |
| 20 " | 5 |
| 21 " | 3 |
| 22 " | 2 |
| 23 " | 1 |

The average interval that elapsed between two subsequent menstruations was, in 52 cases, 26 days; in half of the cases, 4 weeks. The minimum in 1 case was 2 weeks; the maximum in 1 case 4½ weeks. The average duration of the discharge of the blood in the same number of cases was not quite 5 days; the usual duration in more than half of the cases was from 3 to 5 days; in 8 cases it continued for 8 days; in 3 it was of uncertain duration: the mini-

mum was 4 days, the maximum 8 days. The discharge was strong and profuse in 12 women, moderate in 29, weak in 7. In 7 women the menstruation was irregular, either with regard to the intervals, duration, or strength; in 4 cases the medicines were exhibited two or three times, and the regular return of the menstruation was repeatedly observed.

The diseases for which medicines were employed during menstruation were the following.

| | No. of Cases. |
|----------------------------------|---------------|
| Fbr. biliosa | 2 |
| F. scarlatinosa | 2 |
| F. rheumatica | 4 |
| F. biliosa-rheumatica | 1 |
| Rheumatismus | 3 |
| Gonalgia rheumatica | 1 |
| F. intermittens | 2 |
| Angina biliosa | 1 |
| Bronchitis | 2 |
| Pneumonia | 2 |
| Congestiones capitis | 1 |
| Veneficium Ac. nitrico | 1 |
| Hæmatemesis | 3 |
| Chlorosis | 5 |
| Cedema faciei | 1 |
| Tuberculosis | 2 |
| Irritatio spinalis | 4 |
| Anæsthesia | 2 |
| Hysteria | 10 |
| Cardialgia | 1 |
| Mania hysterica | 1 |
| Ischuria | 1 |
| Descensus uteri | 1 |
| Eczema syphiliticum | 1 |
| Scabies | 1 |

—55

[To be continued.]

DIAMETERS OF THE FETAL HEAD.

DR. HEWSON has lately measured the head in the cases of one hundred and sixty-six newly-born children. Each measurement was made with the greatest care, within twenty-four hours after the birth of the child, and registered at the time.

The sum of the measurements of the biparietal diameter, was six hundred and three inches and eighty-eight hundredths, which gives a mean of three inches and six tenths, for that diameter. The sum of the occipito-frontal diameters was seven hundred and seventy-seven inches, and seventy-seven hundredths; the mean, four inches and sixty-eight hundredths. The sum of the occipito-mental diameters was eight hundred and eighty-seven inches and eighty-three hundredths; the mean, five inches and twenty-eight hundredths.—*Phil. Med. Examiner*, October 1851.

CASES OF
DISEASE OF THE HEART.

BY H. S. BELCOMBE, M.D.

Senior Physician to the York County Hospital.

A. B., æt 67, a gentleman of fortune, fond of active and intellectual pursuits; temperament highly nervous and irritable; habits of life social and temperate; general health good; not subject to any periodical disease.

History.—About two years back he began to complain of oppression of breathing occasionally. Soon it was increased by going up any ascent; no other unpleasant symptom, as to sleep, appetite, or any functional disturbance, occurred. Many months thus elapsed, when, finding his ankles beginning to swell, he sought medical advice. His professional friend soon discovered a laborious action of the heart, the obstruction more evident about the tricuspid valves, though the aortic valves appeared also implicated. A. B. was averse to medicine, and pursued, in a great degree, a plan of his own. Thus he sought relief from the use of the sulphurous baths; then a physician in London was consulted by letter; then an eminent one in his own neighbourhood: but he did not permit any perseverance; nor could the most available medicines in this form of the disease be long continued.

I saw him for the first time about two months back. The anasarca was very great, reaching up to the abdomen; the penis and scrotum very fully distended; no effusion either into the thorax or abdomen; respiration normal; appetite good; sleep refreshing, though always lying on the back; bowels moderately open; urine scanty, with a sedimentary deposit of the lithates, no albumen; pulse weak and irregular; the valves of the heart seemed principally affected; no hypertrophy, no dilatation; sense of oppression great on moving or upon being agitated, which was very easily effected.

Puncturing here was of much service, reducing very considerably the enormous swelling. Relief was also obtained by the use of the acetate of potash and senega: mild doses of liq. opii sedativ., with Sp. ætheris sul. co., always combated uneasy feelings, and

soothed apprehensions naturally emanating from such conditions of disease. His mind throughout was calm, collected, and resigned, and he sunk quietly on the morning of Sept. 25. There was no examination.

C. D., a lady of fortune, beyond the meridian of life, but active, intelligent, partaking of all the enjoyments of society with pleasure and temperately. Figure thin and spare; health generally good. The history is very imperfect, as, when my services were summoned, the illness of her medical attendant prevented my seeing him. It would seem, however, that in the May of this year she applied to him on account of swelling of her legs, saying, in her usual animated manner, "You must cure me shortly, for I want to go to the Exhibition." Soon, however, more formidable disease was discovered, and she was placed under his regular attendance and treatment.

I first saw her on September 16. She was placed on a couch, supported by pillows; the countenance was very ghastly; pulse small and feeble; tongue slightly glazed; complete anorexia; bowels irregular; urine very scanty; a slight macous cough; nights sleepless. The lower limbs were anasarcaous up to the body; ascites distinct. The action of the heart very irregular, and confined to a small space. Respiration easy, except when disturbed by the cough. Serenity and tranquillity of mind perfect, but it was evident her days were numbered.

Mild doses of opium procured comfortable nights, also much alleviating the cough. The anorexia was somewhat removed by mustard plasters; but this was all that could be obtained, and she sunk quietly on the morning of the 25th Sept.

I have been told that the foundation of this severe disease could be traced to an attack of influenza two years back.

E. F., æt. 57, a farmer, well to do in the world, active, industrious, and social, with a propensity to indulge in company—a not unfrequent occurrence. Health, up to the period I am to speak of, very good.

He came under my care about the middle of last autumn. His symptoms were those of a dyspeptic, with a slight tendency to jaundice. In a little time

he recovered sufficiently to be enabled to return home. I was not satisfied about a peculiar sense of oppression which he felt occasionally in the præcordia, though it was always relieved by carminatives. The pulse was regular, nor could I trace any existence of cardiac disease. Some months elapsed, when I was informed the dyspeptic symptoms had returned, attended with anasarcaous swellings of the legs, and that my assistance was requested.

Upon my examination, it was easy to detect obstruction about the tricuspid valves, with general derangement of the digestive organs, the kidneys excepted, so far at least as the urine could indicate. Counter irritants, a mild course of mercury with diuretics, afforded some partial relief; but, in a few weeks, the anasarca reappeared, attended with ascites, also sensations threatening hydrothorax. Action of the heart tumultuous; the pulse becoming very irregular, so that there appeared small hopes of life.

Puncturing frequently, paracentesis abdominis (twice) relieved all the watery effusions, while perseverance in the use of strong purgatives, elaterium being often conjoined, frictions of mercury and iodine, succeeded in placing the patient in a comparative healthy condition. My last account, only a few days old, is—"E. F. is in a favourable state; there are no swellings; circulation more regular. He can go about his lands in a gig; natural functions all correctly performed." The distance being considerable, my directions were mostly given by letter, but I had a highly intelligent gentleman to assist me. We have yet to judge of events.

With another case, I will, with your permission, indulge in a few observations on heart disease.

The case to which I now make reference was that of a very elderly lady who sunk under a fortnight's illness, but who up to that period had remarkably maintained her bodily energies and her mental faculties to the last. The heart had been for some time damaged; but beyond occasional dyspnoea, severe palpitations, and irregular pulse, no other adverse symptom appeared. She was seized with an attack of cholera, to which succeeded tumultuous action of the heart, obstinate constipation, and colicky pains. All these were relieved, and the patient seemingly

restored to her usual state of health, when Nature became exhausted, and she sunk quietly. The distance being considerable, I generally passed a day and night in the house, so that I could observe the case narrowly.

It is not my intention in this paper to enter into any detail of the acute and more easily detected diseases of the heart. Pathological anatomy has done so much—the stethoscope has been so serviceable—and able writers have so led our thoughts to the subject, that it would be unnecessary to do so. Nevertheless, in many ailments comparatively slight an examination is neglected, and many circumstances operate to prevent this diligence being exerted; frequently on the part of the patient, who cannot imagine until the symptoms become more distressing that the heart can be the seat of disease; not rarely on the part of the practitioner's surmise that it may be accounted for from some nervous irritability, or some sympathy with dyspeptic complaints, as it assuredly often is.

Mr. Adams, who has inserted an excellent paper on "Diseases of the Heart" in the fourth volume of the Dublin Hospital Reports, states that, "though perhaps there is no disease whose anatomical character is better described than pericarditis, the general signs by which it may be recognised are very equivocal, and much requires to be done by the physician to clear the obscurity." Examinations have been made upon the bodies of persons supposed to have died of diseases of the lungs or of the liver, and pericarditis has been found the true and single cause of death, though never suspected during life.

It would be useless, I think, to dwell upon the metastasis of acute rheumatic inflammation from the synovial membranes of the extremities to the serous membranes of the heart; yet there is a simple rheumatism of this viscus not to be lost sight of. Here the organ is simply and often but transiently affected, just as any other muscle may be. Whether it can be idiopathically affected, I cannot tell; for in all the cases I have observed there have been muscular pains, more frequently in the loins, and suddenly leaving the region, attack the diaphragm, causing a temporary affection of the breathing, and what the sufferer may call spasms in the chest. The countenance undergoes sudden

changes; there are momentarily strong beats of the heart, with intermissions of the pulse; the tongue is somewhat foul; the skin relaxed by profuse perspiration, and the urine remarkably turbid; yet the symptoms are by no means so severely pronounced as those attending the synovial metastasis; nor does the countenance betray that anguish, that anxiety, which it almost uniformly expresses when the membranes of the heart are affected with acute inflammation, from whatever cause proceeding: it may pass on to carditis, or to an inflammatory affection of the serous membrane; therefore it should be watched with care, and a return to the original seat of the disease is its best cure.

Erysipelas may affect the heart, as has undoubtedly been proved by post-mortem examinations. Mr. Adams relates two cases, and incidentally mentions two more; but as yet I believe few have been laid before the profession. I have strongly suspected it in two cases; in one most particularly, where, when the redness of the face and scalp receded, and hopes were entertained of amendment, there came on distressed breathing, agitated countenance, and rest in the horizontal position impossible. No examination was permitted. I have often thought that in the sudden sinking from erysipelas, the intellect remaining clear, such a metastasis had taken place; but there is often a great difficulty in verifying opinions.

Active enlargement of the heart will often remain unnoticed by the subject till the time comes when only palliatives, and those only for a short time, can be employed.

An altered condition in the texture of the valves, and a morbidly contracted state of the orifices which they are destined to shut, form a class of organic lesions, and give rise to a train of symptoms oftentimes very alarming in appearance, never failing to induce distressing apprehensions on the part of the patient, and generally proclaiming the existence of a dangerous and incurable malady.

The semilunar valves of the aorta appear to be more subject to organic derangement in structure than any other part of this system. The mitral valves follow in succession. It has been thought that the tricuspid and semilunar valves of the right side are little subject to disease; but there can be no doubt they

can be affected in the same mode as the left, though the symptoms do not appear so formidable: there is not that great difficulty of breathing or hemoptysis present; and as there is no inordinate, but, on the contrary, diminished quantity of blood sent to the lungs, and its transit through them not impeded when no organic affection of the left side exists, dyspnoea to any great extent does not take place. Generally speaking, I think there is oftener disease of the chylopoietic viscera, principally of the liver, in morbid affections of the right side of the heart. The earlier beat of the jugular veins, the more early anasarca, and the regularity of the pulse, may also offer some diagnostic signs. John Hunter has taught us that the tricuspid valves do not close entirely,—evidently a wise provision for our protection.

The diseases of the heart, then, are principally recognised by post-mortem examinations; and notwithstanding so much has been explained by pathological anatomists, and so much has been detected by acute observers, yet a great part of these diseases are involved in uncertainty as to their idiopathic existence, or as to their dependence upon other and distant disorders of the human frame. It is, indeed, difficult to distinguish between actual and sympathetic disease; for the maladies of the brain, the nerves, the lungs, the diaphragm, are often complicated with symptoms annunciative of a heart attack,—such as palpitation, syncope, feebleness, and intermission of the pulse; but when these signs are joined with those pathognomonic of disease of other organs, it may be presumed there is a complication; also when the palpitations are constant, or nearly so; when they are renewed or increased on the least or the slightest mental or bodily affection, with intermission of the pulse, then there is strong reason to infer the heart is the principal seat of disease; and though the precise seat may not be determined, the same practice will apply.

It must never be lost sight of that the brain and the heart have a reciprocal influence on one another. The affections of the mind will agitate the heart so as to produce distress, inordinate action, disease; and what becomes of the seat of our ideas, sensations, reflections, when not healthily supported by the action of the heart?

MEDICAL GAZETTE.

FRIDAY, NOVEMBER 7, 1851.

IN our last number we inserted a series of letters in reference to a case of some notoriety in which Dr. E. MURPHY, Professor of Midwifery at University College, was consulted. The case has already excited some controversial discussion, both in a medical and a medico-ethical point of view; but the subject has been up to the present time placed before the profession in a fragmentary form. There has been just enough circulated to lead medical men to suppose that Dr. Murphy had committed some enormous crime, and had made a capital mistake on a question with which, as a professor of obstetric science and practice, he is supposed to be fully conversant. The perusal of the entire correspondence will, we think, have fully satisfied those who have been hitherto misled by *ex parte* statements, that Dr. Murphy does not in any respect deserve the censure which has been passed upon his conduct in this affair.

The controversy is, in fact, proved by these letters, now for the first time published in an entire state, to be, like nine-tenths of all controversies, a dispute of a verbal nature, and to have arisen partly from captiousness to take offence where none was intended, and partly from a misapprehension of the terms used in the certificate given by Dr. Murphy to the practitioner by whom he was consulted.

We are no friends to homœopathy or homœopathists, as the pages of our journal frequently show; but we must protest against the system of condemning professional men upon *ex parte* statements, or assuming that a man is in collusion with quacks because he innocently gives an opinion according to the

best of his judgment on the data before him. This system of intimidation savours more of Californian than English practice.

In future, when a London practitioner of eminence is consulted in a case of emergency by electric telegraph, his line of conduct is *not* to go until he has satisfied himself that the person who sends for him, although he may be a duly licensed medical practitioner, does not practise homœopathy, or sanction in any way homœopathic doctrines. If this should be the case, then, according to modern and liberal oracles in medical ethics, he should allow the woman to die rather than sully his reputation by meeting an homœopath. He should not for one minute sanction by his presence the practice of a man (although holding a regular diploma from a Royal College of Surgeons) who has the slightest faith in homœopathy.

If, however, he unknowingly obeys the electric mandate, and finds on his arrival a man with an homœopathic bias in attendance, and no anti-homœopath in consultation,—the woman at the same time in desperate need of medical advice or assistance,—his line of duty is clear. He is bound, according to the modern code of ethics, to leave the spot. He should do nothing to sanction the opinion of the man who has called him in for consultation; for, in giving a certificate of his *bonâ fide* opinion on a fair judgment of the facts, he may be unknowingly condemning the practice of some other rival practitioner. The words of his certificate may be so twisted as to convey this meaning, and a few extracts from letters taking only one side of the question may lead to his professional annihilation.

As far as we understand the facts in the Norwich case, we infer that Dr. Murphy did *not* know that the gentleman who summoned him in consultation was tainted with homœopathy. The

case in which he was consulted had no bearing whatever on the doctrines or practice of Hahnemann; and, had he not under the circumstances given his opinion on a case to which he had been thus urgently summoned, he would have been guilty of a gross dereliction of duty in the eyes of the public and profession. Unfortunately, in carrying out this duty, he was not aware that the case had already become a battle-field between two rival practitioners, and that he could not even give a conscientious opinion without creating a bitter feeling of hostility in the mind of one of them no longer in attendance. Dr. Murphy's position on this occasion, may be to-morrow *that* of any consulting physician or surgeon of eminence in this metropolis; and it is desirable, therefore, to consider the probable effect of this new rule of ethics on the profession and the public. The physician or surgeon must *not* attend to the summons, because, although the name of the practitioner is to be found in the Directory with a qualification attached to it, it is just possible in these heretical times that the man may be a homœopath in disguise! If he should get over this step, enter into consultation, and the case turn out to be one having not the slightest reference to the absurdities of homœopathic doctrines or practice—*i. e.* let us suppose it to refer to the treatment of flooding, or the removal of a limb rendered necessary by a severe accident, then he has another difficulty to encounter:—his written opinion or advice may be made a subject of casuistical criticism; he may be charged not only “with having bolstered up the reputation of a homœopath, but flown in the face of all honourable practitioners;” and lastly, he will be made the subject of an entire vivisection in a “Half-yearly Abstract.” After the Norwich case, any physician or surgeon, however eminent, would be

rash to incur such a series of perils. If, unknowingly, he has obeyed the summons, then he has only one course to pursue. Let him rush from the presence of the globulistic quack, as from that of a rattle-snake. As a writer in a contemporary journal remarks:—“Let the profession *stand by*, and leave the globulists to their blunders of diagnosis, and to answer alone to families whom they assist in bereaving.” We do not know what the profession will think of this sort of advice—*i. e.* to let the patient die when we could stretch out a hand to save him, because his death may tend to show the fallacy of resorting to homœopathic practice; but we believe that such an evil-minded way of displaying hostility to a medical heresy would have the very opposite effect to that supposed. It would show that members of the medical profession, even when called in consultation, preferred gratifying feelings of personal enmity in preference to aiding a misguided brother-practitioner in saving the life of a patient.

No medical man should knowingly meet in consultation one who is practising homœopathy, or any other false system of medicine; but if he be consulted by one who holds a diploma, and concerning whose therapeutical practice he can possibly know nothing, he is bound to give his advice and opinion conscientiously, even although it may ultimately have the supposed effect of injuring the reputation of some highly respectable and intelligent surgeon. We hold that the life of a fellow-creature is of greater concern to a conscientious practitioner than the quarrels of medical men; but the new code of ethics would teach us that it is better the patient should die a victim to homœopathic delusion, than that any attempt should be made to save life. The “bereaved” may in time be brought by such a line of conduct to discover from the number of deaths

in their families, that in the event of illness they ought to send only for those practitioners who are decidedly hostile to Hahnemann's system of medicine!

THE establishment of LUNATIC ASYLUMS for the MIDDLE CLASSES has already occupied the thoughts of benevolent individuals, but without yielding any practical results. It is now, however, brought directly, and in a distinct form, under the notice of the profession, by Dr. Henry Monro, in the first of a series of essays, having for their object the improvement of the condition of the insane.

Whilst the claims of our poorer, and the requirements of our more wealthy neighbours, are alike amply provided for, it remains an anomalous fact that we have yet to plead the wants of the middle classes. That a provision so absolutely needful as that of lunatic asylums for the middle classes should hitherto have been overlooked, is matter of unfeigned surprise. It is not easy to account satisfactorily for the neglect of claims so obvious when pointed out, and confessedly so important to those persons on whose behalf they are made. It may probably be in some degree attributable to a feeling which too often induces Englishmen to seek for objects of benevolence out of their own sphere, or class; thus inflicting irreparable injury by their partial philanthropy. Whatever may be the source of the error, when the benevolence or zeal of one beyond that of his fellows arouses attention, our only course must be to make speedy and efficient reparation.

Such is the position of the question, the pleading of which Dr. Monro has so zealously undertaken, and whose humane object we would, from a full conviction of the justice of the claim, aid by every means in our power. But we will allow Dr. Monro to speak

for himself, in advancing his plea for a class which has frequently no alternative but unrestrained mental disease, or association with individuals inferior to its own in education, and in refinement of feeling.

"What can the father of a family, the possessor of an income averaging £150 or £250 per annum, do, when one son out of five becomes insane? or what can the children do for that father? What can the clergyman, the medical man, the man of small business—I may say, the great majority of the middle classes—do? Can those who have always known what it is to have a home of refinement,—though not of affluence,—who have been accustomed to the quiet and affection of that home (often, perhaps, all the more tenderly regarded because poor),—be thrown among the illiterate and coarse-minded, and escape with impunity not only injury to their present feelings, but, what is worse, a great obstacle to their chances of recovery? Would it not be dreadful to a person in health, living the life of a gentleman, if he were thrown suddenly into a workhouse, and treated like a pauper; if he were not only separated from all the ties of affection (which in the case of the insane may be necessary), but surrounded suddenly by that which he has ever looked upon as a resource which, under no circumstances, he could accept? And if this is the case with a person in health, who sees and knows the boundaries of what is and what is not,—who can exercise his intellect in contriving plans for himself, and knows that all human evils have their limits; how dreadful would it be to minds which are oppressed with that anguish and restlessness which only those experience, who have lost the power of their judgment, and know not whither they are drifting!"

They alone who have been personally acquainted with all the distressing circumstances attending the occurrence of insanity in a respectable family, possessing only moderate means, can fully realise the boon which is held out by the proposal of Dr. Henry Monro, to establish asylums for their especial use.

An acquaintance with mental disease, as seen in the well-appointed asylums for county paupers, or in the luxurious mansions assigned us for private asylums to the wealthy, affords little or no estimate of the anguish and sorrow that occur among the middle classes under similar circumstances. The peculiar claims of the middle classes are thus well stated by Dr. Monroe:—

“Supposing the distress of the two classes to be equal; this class in a certain sense deserves more at our hands than the poorer class. For though pauperism is by no means always the result of sin, it very often is so; and on the other hand, to have maintained a family with difficulty in an educated and respectable condition, is itself very often a sign of good intentions and good living. Wealth and realized property may argue little as to moral position—not so with hard-earned respectability; and yet we have been, and are, continually assisting the poor, while we have done little or nothing for the class just above them. Education is a talent which each person is bound to accept when offered to him; and yet, when it is attained, it doubtless very much increases sensibility to all the evils to which we are subject.”

The moderation which characterises Dr. Monroe's proposal, for the commencement of an institution of the nature here referred to, is regarded by us as an additional augury of the ultimate attainment of a more extended sphere of operations. No intention exists of asking the public to aid us in the establishment of large and costly institutions. The asylums for which we now plead will find a surer element of permanency in the self-supporting principle which maintains personal respect and independence, and offers some assistance to straightened circumstances, while at the same time it duly honours the dignity of industry.

The following are Dr. Monroe's suggestions on this point, and on the delicate matter of medical supervision:—

“Let us suppose we could open a

house for 40 inmates (20 of each sex), and place the expense of opening the house on the charity of a few individuals, and the current expenses of each inmate upon his own friends. Let us consider that each inmate would require the expenditure of £50 per annum,—namely, £40 for his support and share of attendance, and £10 for his share of house-rent, coals and candles, &c.; that the £40 per annum were defrayed by his relatives, and the £10 per annum represented the gift; the medical attendance being the voluntary work of such gentlemen as were interested in the working of the house.

“The £10 for each case would constitute the only sum required from the benevolence of other individuals.

“I esteem it to be very necessary that four or five medical gentlemen, of experience and reputation, should be connected with the control of such a charity; not only that by this means gratuitous medical aid may be given with ease by the division of labour, but more especially that this would be the only safe mode of removing the charge of deriving personal advantage from it. If one or even two conducted it, it might be said that such a charity had become but the feeder of their individual private practice (a common and not unnatural charge urged against medical charities). Moreover, it would lose the great advantage of being a means of uniting those connected with the cure of the insane. Any honourable mind engaged in this branch of the profession would feel the weight of these charges peculiarly; they would very rightly deter a man from entering the arena. We may stand with impunity many aspersions, but this sort of charge is one which all should desire to escape from, both for his own well-being, as well as that of the work in which he is engaged.”

For a more full exposition of this question, however, we must refer those who are interested in this question to Dr. Monroe's pamphlet, in which it is discussed in all its bearings.*

We have here given a mere sketch of the measure intended to supply a great

* “On Improving the Condition of the Insane.” By Henry Monroe, M.B., Oxon. Churchill. 1851.

social want. Its further development must depend upon the response made by the professional and other classes for whose benefit the suggestion is now advanced.

UNDER the City of London Sewers' Act (1851), a power is given to the Commissioners to put a stop to one of the greatest nuisances arising from the construction of large manufactories in the midst of a crowded population. The following order has been recently issued according to the terms of the Act:—

“That from and after the first day of January, one thousand eight hundred and fifty two, every furnace employed or to be employed in the working of engines by steam, and every furnace employed or to be employed in any mill, factory, printing-house, dye-house, iron foundry, glass house, distillery, brew-house, bake house, gas-works, water-works, or other buildings used for the purpose of trade or manufacture within the city (although a steam-engine be not used or employed therein), shall in all cases be constructed or altered so as to consume the smoke arising from such furnace; and if any person shall after the first day of January, one thousand eight hundred and fifty two, use any such furnace which shall not be constructed so as to consume or burn its own smoke, or shall so negligently use any such furnace as that the smoke arising therefrom shall not be effectually consumed or burnt, or shall carry on any trade or business which shall occasion any noxious or offensive effluvia, or otherwise annoy the neighbourhood or inhabitants, without using to the satisfaction of the Commissioners the best practicable means for preventing or counteracting such annoyance every person so offending shall forfeit and pay a sum of not more than five pounds, nor less than forty shillings, for and in respect of every day during which, or any part of which, such furnace or annoyance shall be so used or continued.

By order of the Commissioners of Sewers of City of London,

JOSEPH DAW,

Sewers' Office, Guildhall, Principal Clerk.
9th Sept., 1851.”

The order of the Commissioners, it will be perceived, refers only to mechanical alterations of furnaces; but there is another method by which the difficulty may be overcome, namely, by the substitution of anthracite for the highly bituminous coal now universally and most wastefully employed in London. The efficacy of anthracite as a substitute for Newcastle coal, and the perfect avoidance of the smoke nuisance by its use, have been fairly tested on a large scale during the last six months. The boilers which provided steam for the Great Exhibition during the time it was open, were heated by anthracite; and there was no complaint of smoke, although the daily consumption, from the enormous power set in motion, must have been immense. The question is therefore practically solved by a change of fuel. Anthracite may be procured in almost unlimited quantities from South Wales; it has hitherto been a costly article in the metropolis, in consequence of the small demand for it. In fact, except in Arnott's stoves and in hot-houses, its use has been scarcely known. The bituminous coal, on the other hand, is procured cheaply and abundantly, and although its employment in large manufactories inflicts an abominable nuisance on a whole neighbourhood, manufacturers have been hitherto perfectly indifferent on this point, as they have looked to commercial and not to hygienic results. The new order will probably cause a greater demand for anthracite, the city atmosphere will be less clogged with soot, and bituminous coal will become much cheaper to the poorer classes. The order applies only to manufactories, not to private dwellings. There is no doubt that this is a step in the right direction. The principle, *Sic utere tuo ut alienum non lædas*, here comes into play. No man has a right to smother his neighbour with soot for the sake of saving

his own pocket and adding to his annual profits.

IN several actions for the recovery of sums charged for medicine and attendance, pettifogging solicitors have hitherto succeeded in defeating a just claim, by insisting upon proof from oral evidence that the certificate to practise granted by the Apothecaries' Society, was a genuine document. The new Law of Evidence Act which has just come into operation will in future put a stop to a plea of this kind in bar of payment. We here transcribe the 8th clause of this Act (14 and 15 Vic. cap. 99) for the information of our readers:—

“Every certificate of the qualification of an apothecary which shall purport to be under the common seal of the Society of the art and mystery of Apothecaries of the City of London shall be received in evidence in any court of justice, and before any person having by law or by consent of parties authority to hear, receive, and examine evidence, without any proof of the said seal, or of the authenticity of the said certificate, and shall be considered sufficient evidence that the person named therein has been from the date of the said certificate duly qualified to practise as an apothecary in any part of England and Wales.”

This very useful measure received the Royal assent on the 7th August, and came into operation on the 1st November.

Reviews.

The Journal of Psychological Medicine and Mental Pathology. October 1851.
Edited by FORBES WINSLOW, M.D.

DR. WINSLOW's enterprising undertaking—the publication on his own responsibility of a quarterly journal devoted to the subject of insanity, and to the promotion of the professional interests of those who are more particularly engaged in the treatment of that malady—appears to be receiving the support which

the abilities and energy of its editor so fully merit.

The present number has as strong claims as any of its predecessors upon the attention of medical readers, to whom, whatever may be their position, topics having relation to mental diseases and therapeutics must be of paramount interest and importance. A brief allusion to the articles in the October number will confirm our commendation.

We first meet with an article on Sleep, Dreaming, and Insanity, founded upon a perusal of the following works:—“Sleep and Dreams,” by Dr. J. A. Symonds, of Bristol; “Sleep psychologically considered,” by Dr. Fosgate, of New York; “What is Mesmerism?” by Dr. Wood, of Edinburgh; “The Mesmeric Mania of 1851,” by Dr. Bennett, of Edinburgh: an article in which the psychological and physiological phenomena of sleep are very lucidly expounded.

“The Theory of Reasoning”—a review of a work bearing the same title, by Mr. Samuel Bailey—constitutes the second article, in which the subject is logically discussed.

Two subsequent articles give a very comprehensive view of the present condition of lunatic asylums in England and Ireland.

The fifth article offers comments upon the opinions of Mr. Warren (author of “Diary of a late Physician”, and we would add (*quantum valeat*) of “The Lily and the Bee”) upon the character and value of medical evidence in cases of insanity: in the remarks there offered the writer vindicates the medical profession from the slight put upon it by the barrister.

Following this we meet with an instructive disquisition upon a murderer's confession.

This number contains, also, a paper on the Improvement of the Condition of the Insane, by Dr. Henry Monro; a translation of a paper by M. Brierre de Boismont, on the Last Sentiments of Suicides; and sundry other matters of much interest to the readers of the journal.

We sincerely trust that Dr. Winslow may continue to receive that support which we have already claimed on his behalf in the management of his very valuable and useful Journal of Psychological Medicine.

Die Ohrenheilkunde in den Jahren 1849 und 1850: Ein Wissenschaftliches Zeitbild (A Scientific Picture of Aural Medicine in the Years 1849-50). By Dr. W. KRAMER. 8vo. pp. 117. Berlin: Nicolai. 1851.

The picture here presented is a continuation of an historical sketch drawn by the author in his work on Diseases of the Ear, published in 1849, and which embraced the history of the literature of Aural Medicine up to the end of 1848. The objects brought before us in the present "Scientific Picture" are the original works and most important articles in journals that have appeared since that date, and which are criticised by the author, who states their chief points, and exposes their several defects or faults. The following is an enumeration of the writings thus brought under examination:—

1. Kramer—Diseases of the Ear; their Treatment, &c. 1849.
2. M. Frank—On the Present Aspect of Otiatric Objective Diagnosis. 1849.
3. W. Löwe—The Knowledge and Treatment of Deafness. 1849.
4. F. M. Feldberg—Deafness Curable. 1850.
5. Yearsley—Deafness Practically Illustrated. 1850.
6. W. Harvey—On Excision of Enlarged Tonsils, &c. 1850.
7. G. Stuhlmann—On the Contents of the Eustachian Tube and Cavity of the Tympanum, in Oppenheim's Zeitschrift, January 1849.
8. Passavant—On the Pathological Condition of the Internal Ear in the Bodies of those who have Died from Phthisis: from Henle and Pfeuffer's Zeitschrift. 1849.
9. Grämer—Case of Purulent Deposit within the Cranium, &c.: from Casper's Wochenschrift. 1849.
10. Oppolzer—On Discharges from the Ear: from the Deutsche Klinik, No. 7. 1850.
11. H. E. Richter—Organon of Physiological Therapeutics. 1850.
12. Deutsch—Discharges from the Ear: Mediz. Ztg. 1850.
13. Führen—Hydrocephalus Acutus: in Deutsche Klinik. 1850.
14. S. Holländer—Fatal Headache and Polypus of the Ear: in Zeitung der Vereins für Heilkunde in Preussen. 1850.
15. Clemens—Otitis Interna: from the Deutsche Klinik. 1850.

16. Oberstadt—Cure of a Deaf-Mute: from the Rheinische Monatschrift. 1850.

17. Berend—Cure of a Deaf Mute: from Allgem. Mediz. Central-Zeitung, 1850.

18. E. Schmalz—Statistics of Seven Hundred Cases of Diseases of the Ear: from Oppenheim's Zeitschrift. 1850.

19. Tsharner—Contribution to the Statistics of Diseases of the Ear: from the Schweizerische Ztschr. 1849 and 1850.

20. Luschka—On the Voluntary Movement of the Tensor Tympani Muscle: from the Archives für Physiol. Heilkde. 1850.

21. Otitis—In the Lancet, June 1849.

24. Harvey—Rheumatic Diseases of the Ear. Ibid. October.

25. Toynbee—Pathological Investigations into Diseases of the Ear: from the Medico-Chirurgical Transactions. 1849.

26. Idem—On the Causes and Treatment of Deafness in Old People: from the Monthly Journal, 1849.

27. Idem—Exostoses of the External Auditory Passages: from the Provincial Journal. 1849.

28. Idem—On Obstruction of the Eustachian Tube: from the London Medical Gazette. Feb. 1850.

29. Wakley and Turnbull—Glycerine in Deafness: from the Lancet and Monthly Journal. 1849.

30. Vidal—Removal of Foreign Bodies from the External Auditory Passage: from the Bibliotheque du Médecin Practicien. 1849.

31. Junod—On Catarrhal Deafness: from the Gazette Medicale de Paris. 1850.

32. Dronsart—On Fracture of the Petrous Bone: Séances de l'Académie de Médecine, Paris, 1850.

In his critical examination of Mr. Toynbee's pathological researches, the author expresses a difference of opinion from that pathologist with reference to the frequency of thickening of the mucous membrane, and obstruction of the Eustachian tube, as a cause of deafness. We have not space to follow Dr. Kramer in his critique upon the diagnostic value of the otoscope, and upon the treatment proposed by Mr. Toynbee; but as the contributions of that pathologist are among the most valuable that have lately been made to aural medicine, we would commend the author's criticisms to our readers' particular notice.

Having looked through Dr. Kramer's remarks upon the writings enumerated above, we consider, so far as we are acquainted therewith, that he presents a very fair estimate of their value; and we regard his publication as a very instructive review.

In the observations which conclude the work, Dr. Kramer dwells upon the importance of the study of aural medicine to practitioners in general, and urges that these diseases should constitute one of the subjects of examination in obtaining degrees. The author also appends a table, showing the relative frequency of different forms of disease of the ear in four thousand cases that have come under his own observation.

Proceedings of Societies.

PATHOLOGICAL SOCIETY OF LONDON.

October 21, 1851.

DR. P. M. LATHAM, PRESIDENT.

THE first meeting for the present session was held on the third Tuesday in October last, at the Society's Rooms. The meeting was a large one, and the President commenced the proceedings at 8 o'clock, by calling upon Dr. OGIER WARD, who presented a

Case of Diamond-shaped Head from compression at birth.

The child presented to the Society whose head had been distorted by compression at birth, is 17 months old, and is the tenth child, a female, born after a natural labour of six hours' duration. At the time of birth, the head was compressed laterally, and elongated upwards and backwards, the right parietal bone rising in a ridge over that of the opposite side along the sagittal suture.

May 20th (fifteen days after birth).—The head remains in the same state. The child is easily startled at the least noise, and is "convulsed" and troubled with flatulence. It looks healthy, but it is very small.

Sept. 21st.—Lately the child has begun to thrive, having for a long time scarcely appeared to grow at all. It is much less troubled with flatulence, but it starts and screams occasionally without any apparent cause, unless it be from its teeth, which are beginning to distend the gums. The head is much distorted, though the right parietal no longer rises above the left. It is

more deformed than the ordinary oblique-shaped head, for besides the right side of the head being advanced before the left, it is very much flattened above the ear, where it is over-arched by the left side, giving the child a wry-necked appearance. The left side of the head projects more back than the right does forwards, and the whole right side appears smaller than the other. The point of the hairy scalp is over the right eye.

Since the last report, the head has very much improved in symmetry, and the child is now thriving, though still troubled with convulsive movements, attended by screams.

Three crania from the Museum at St. George's Hospital were exhibited, presenting the same deformity, the right side projecting before the left, which was also the case in all the crania and living instances Dr. Ogier Ward had met with, and was attributed by him to the left side of the head at birth being compressed against the sacrum, while the right side turned upon it just previous. Observations were made by several members on this case.

Dr. PEACOCK expressed his belief that the malformation was due to the position of the head whilst the child is being nursed or carried in the arms; the weight of the brain being sufficient to cause the distortion in rickety children, or those having a tendency to that disease. The nurse, in the present instance, said that she carried the child most frequently in the position corresponding to the direction of the deformity.

Dr. BRINTON pointed out the lengthened period during which it was necessary to retain pressure on the head, in order to cause the malformation peculiar to the Caribbean and other Indian tribes. He thought the necessity thus shown inconsistent with the possibility of the malformation being caused by the pressure during parturition.

Dr. M'INTYRE inquired the pathological signification of these cases,—what effects they gave rise to, and how they were to be treated?

Dr. COPLAND said that he had many years ago pointed out, in his Dictionary of Practical Medicine, the existence of these cases, and their connection with idiocy, convulsions, and similar diseases; he thought that the malformation preceded and was altogether independent of parturition. He had recently seen one of these cases in which the shape of the brain corresponded to that of the head.

Dr. OGIER WARD could not deny that in some instances the deformity might be the result of original malformation of the foetus, but he had met so many cases of

the diamond-shaped head (only one of which had remained permanent, the mother being similarly deformed), that he could not believe them all to be malformations; they also occurred in children from their birth, who had never exhibited any other symptoms of rickets. In all the cases except one, cerebral symptoms had existed in a greater or less degree during the continuance of the deformity.

Disease of the Urinary Organs—Stone in the Left Kidney.

Mr. COULSON exhibited a specimen taken from a man fifty years of age, who had suffered upwards of twenty years from stricture of the urethra, abscess in the perinæum, and retention of urine. On the 19th Sept. he was admitted into St. Mary's Hospital. The urine passed in drops both through an aperture in the perinæum and the urethra: it was alkaline, and contained a good deal of mucus and albumen. No instrument could be passed through the stricture, which was seated at the bulbous portion of the urethra. As the pain and difficulty of passing the urine was very great, it was thought that a free exit for the discharge of the water might lessen the patient's sufferings. On the 8th of Oct. Mr. Coulson divided the stricture through the perinæum, and easily introduced a catheter, which was retained in the bladder forty-eight hours. The first effect was relief to the pain, but on the next day it returned, and increased in severity until the 14th, when he died.

Post-mortem Examination.—There was an incision an inch in length in the median line of the perinæum dividing the bulbous portion of the urethra, which was considerably thickened: in the membranous part there were two openings, one leading to the abscess in the perinæum, and the other going towards the pelvis. The bladder was very much thickened, and its mucous surface in several parts destroyed.

On the posterior surface of the prostate there was an abscess about the size of a hen's egg, not communicating, however, with the bladder or rectum.

The left kidney was enlarged, sacculated, and distended with pus, the whole of its proper structure being absorbed. In its lower part there was a large calculus, which occupied nearly the whole of the lower half of the kidney, projecting into the infundibulum and pelvis. The ureter was very much enlarged, the mucous membrane being rough and of a dark colour; there was a contraction of the canal and hardness of its walls. The right kidney and other organs were healthy, with the exception of the liver, in which there was incipient fatty degeneration.

Dr. W. T. GAIRDNER presented a drawing of

A Remarkable Cyst in the Omentum.

The cyst was found beneath the anterior layer of the greater omentum, in a woman who died unexpectedly, having a very large fibrous tumour of the uterus. It consisted of a highly transparent closed sac, between three and four feet in length, and from half to one and a half inches in breadth, having a lobulated appearance externally, like that of a distended colon, but in no part subdivided by any approach to complete septa. The sac was fed by numerous vessels running within the omentum and ramifying over it in every part. These communicated with a large artery and vein the size of the largest goose-quills, which ran along the greater part of the cyst, and opened into other hypertrophied vessels, especially one artery and vein, of equal size, passing from the lower border of the stomach down the centre of the omentum. The fluid in the sac was a transparent colourless serum containing numerous flocculi: these, on microscopic examination, showed the ordinary filamentous appearance of fibrinous or albuminous matter, entangling various nuclei and imperfect forms of epithelium, evidently detached from the inner wall of the cyst. Nothing like ova, or like any portions of the structure of the true entozoa, could be discerned in the fluids; nor did the examination of the interior of the cyst's membrane (so far as it could be pursued without altogether spoiling the preparation) reveal any more organized structure than that of an epithelial membrane.

The peculiarity of the cyst is its anatomical disposition; and, if it is to be regarded as belonging to the class of simple serous cysts, it is probably an undescribed variety of that class. The serous cysts hitherto mentioned by authors as not belonging to the class of animal parasites have been simply globular structures, in some cases clustered together, or assuming some peculiarity of form from their anatomical relations, but not departing far from the globular type. The remarkable elongation in the present instance, the lobulated form, and the great enlargement produced in the vessels of the parent structure, seem to imply a higher power of independent organization in this than in any previously described simple cyst.

The mode of origin of such a structure, especially in the omentum, where cysts are exceedingly rare, appears quite open to speculation. The case is rendered more remarkable by the fact that, in conjunction with the structure above mentioned, there was found in the cellular tissue of both

groins a cluster of globular cysts of the ordinary type; that similar cysts were found in the interior of the fibrous tumour; and that, in the velum interpositum, occupying the position of the gland, there was a globular cyst of the size of a bean. The organs of the body were, with the exceptions mentioned, healthy.

Dr. QUAIN remarked that the origin of this peculiar cyst was a subject of much interest. It must be either a new formation or a modification of some of the existing textures. Of the former mode of origin there appeared to be no evidence. Could this peculiar elongated cyst, then, be due to a serous infiltration,—to a dropsy, in fact, of the cellular sheath of some of the mesenteric vessels which had been congenitally or morbidly modified by disease as to admit of this peculiar change?

Dr. GAIRDNER thought that the complete formation of the cyst and the presence of epithelium militated against this view.

Mr. PRESCOTT HEWETT presented a specimen of

Laceration of the right lateral sinus, with extensive extravasation of blood between the bone and the dura mater, the result of an injury.

The patient, a middle-aged man, was admitted into St. George's Hospital at the latter end of August, with the following history.

At two in the afternoon, it appeared that he had fallen out of a cart, and struck his head; this was followed by very slight symptoms, which soon passed off, and after having taking a little brandy and water, he proceeded about his business, and drove six miles out of town; at six in the evening, however, whilst delivering his last parcel, he suddenly became quite insensible, and fell. He was seen by a medical man, who bled him: he was subsequently brought to the hospital, and when admitted presented well-marked symptoms of pressure on the brain. The various parts of the skull having been carefully examined were found to present a natural appearance, but pressure on the right parietal bone just above the ear, and only in this spot, made the patient shrink, and the movements of the left arm appeared to be somewhat more sluggish than those of the right. The countenance was not in the least distorted. Mr. Prescott Hewett, thinking that the symptoms of compression might depend upon an extravasation of blood between the bone and the dura mater, produced by a fissure of the parietal with laceration of the middle meningeal artery, determined upon making an incision down to that bone. The incision was carried across the two anterior thirds of the lower part of the parietal, but no

fissure was detected, neither was there any single sign to show that the bone had been in any way injured. The patient continued much in the same state, and died about two hours and a half after his admission. At the post-mortem examination a fissure was found in the right parietal, but at the posterior and inferior part of the bone; traced out, this fissure passed downwards, and divided into two branches, one of which crossing the petrous and mastoid portions of the temporal terminated in the posterior fossa of the skull. The lateral sinus, just as it turns under the petrous part of the temporal, presented an extensive laceration in its outer wall, which had given rise to an immense extravasation of blood between the bone and the dura mater, and a corresponding depression of the brain; the other branch of the fissure terminated in the middle fossa of the skull: the brain itself was healthy in structure, save in one or two spots, where it was slightly bruised.

Mr. OBRE presented some

Crystals formed on the surface of the body previous to death by Cholera.

A female, tall and spare, aged 65 years, in the summer of 1848, after many years' extreme suffering from disease of the right knee-joint, had the limb removed by Mr. Obre: she made a rapid recovery, and continued in good health until the night of the 18th of September, 1850, when she was attacked with cholera, and was treated by Mr. Britton, of St. John's Wood. On the 20th she was visited by Mr. Obre, who found her in a state of extreme exhaustion: the cramp, vomiting, and diarrhoea, had subsided, but the voice was hoarse, pulse low, and no urine had been passed since the attack began: on the 23d low fever made its appearance, the cerebral functions became impaired: three ounces of urine were passed, being the first since the 18th; camphor was prescribed. On the following day four ounces of urine were drawn off by the catheter: in the afternoon, when visited, the pulse was found imperceptible and the extremities cold. She continued in this state until about 8 o'clock the following morning, when the surface of the body was observed gradually to resume its heat and become warm, with a general redness, described by her family "as if in a state of fever." They observed that the face became covered with small white particles, which, when wiped off, were soon reproduced. Mr. Britton (who on entering the room asked "had the face been powdered") found this unusual appearance was owing to the presence of small crystals, which, though most abundant on face and neck, covered more or less the entire body. The formation of the crystals continued until 2 o'clock P.M., when she died,

having been comatose for 24 hours. Mr. Obre visited her half an hour after death, and found the crystals beginning to deliquesce, but still generally diffused over the face and forehead. Two days after death, on visiting the body, it was found quite damp and the hair wet, from the deliquescence of the crystals. It was conjectured that the perspiration had become impregnated by the salts of the suppressed urine, and crystallized when exposed on the surface: on examination, the crystals are found to be soluble in ether and alcohol, and to form a soapy substance on being rubbed with alkalis: exposed to heat, they melt and become transparent: when burnt, they leave a slight ash. No traces of uric acid or urates can be found: under the microscope they have not the appearance of saline crystals, but rather that of stearine or some fatty matter, which is no doubt the essential composition: it was supposed at first that the crystals were the results of the salts of the suppressed urine, having made their appearance in the cutaneous secretions, and then crystallized on the surface.

Dr. PEACOCK presented a specimen of *Obstructive Disease of the Aortic Valves, dependent on Malformation — Small Aneurism in the Ventricular Septum.*

The subject of this case was a man forty years of age, who was admitted into St. Thomas's Hospital under Dr. Peacock in July last. He had been ailing for eleven weeks, but before that time had never suffered from any serious disease or injury. His illness commenced with slight rheumatism and dyspeptic symptoms, and to the latter were superadded, soon after his admission, considerable difficulty of breathing and pain across the epigastrium: a loud and harsh systolic murmur was audible over the upper part of the sternum, and in the precordia, and no second sound could be detected. The difficulty of breathing and epigastric pain increased, and he became the subject of double pneumonia, under which he sank about three weeks after he entered the hospital.

The left ventricle of the heart was somewhat hypertrophied and dilated, and the aortic valves were very extensively diseased. The contiguous sides of the right and posterior valves were united so as to produce one large valve, imperfectly divided on its upper surface, and the posterior and left valves were also partially adherent. The fusion of the valves was evidently of very old date, and most probably congenital. At the base, and rather to the left side of the right valve, there was a small aperture leading into a sac situated in the substance of the septum of the ventricles, and which formed a slight pro-

trusion into the right auriculo-ventricular aperture. A second and larger aperture leading into the same sac was situated in the space between the right and posterior valves, and a communication also existed between it and the right sinus of Valsalva; but this was probably the result of decomposition after death. The sac was of sufficient size to lodge a hazel-nut, and was lined by a distinct membrane, but it did not contain any laminated coagula. There were vegetations of a recent date in the aortic and mitral valves, and on the endocardium of the left ventricle.

Dr. Peacock regarded the case as one of congenital malformation of the aortic valves, and he supposed that at the time the slight rheumatic symptoms occurred, eleven weeks before the admission of the patient into the hospital, the valves had become the seat of inflammation, and thus the obstruction at the aortic orifice, originally only slight, became much aggravated, and probably led to the formation of the small aneurism. Cases very similar in many respects have been placed upon record by Dr. Hope and Dr. Thurnam, and some recently by Dr. Todd.

Dr. PEACOCK also presented a specimen of *Obstructive and Regurgitant Disease of the Aortic Orifice.*

This specimen was removed from a female, aged 33, who first came under Dr. Peacock's care at St. Thomas's Hospital, May, 1851. She stated that she had been first seized with the symptoms under which she laboured when in an advanced state of pregnancy six months before, and that she never had rheumatism, inflammation of the chest, or any other disease to which her illness could be ascribed. She suffered from palpitation, great difficulty of breathing, and a severe pain in the epigastrium, and extending thence to the spine, and down to the left arm.

A loud systolic murmur was heard over the upper part of the sternum, and this was succeeded by an imperfect second sound, terminated by a diastolic murmur, which was most distinct at the lower part of the sternum. While in the hospital she improved so as to be able to resume her usual avocations, and Dr. Peacock did not see her again for some months. She then applied at the hospital as an out-patient, and stated she had been pretty well till she had again become pregnant, and her breathing was extremely difficult. She died about three months ago, three or four days after her confinement.

The heart was found very large, and the left ventricle especially was much hypertrophied and dilated. The aortic orifice was considerably diminished in capacity,

the outlet measuring in circumference only twenty-two lines, and at this point there was a very considerable deposit of atheromatous material under the lining membrane. The inlet of the orifice was relatively large, measuring thirty-one lines. The valves were diseased, the left and posterior valves being much thickened and their sacs very shallow, while the right valves, together with the corresponding sinus of Valsalva, had undergone considerable dilatation, and presented at its most dependent part an orifice by which a column of fluid freely regurgitated from the aorta into the left ventricle.

The case afforded a good example of one of the modes in which alterations in the relations as to capacity of the inlet and outlet of the aortic orifice operate upon the valves so as to occasion their incompetency.

EPIDEMIOLOGICAL SOCIETY.

THE first ordinary meeting of the present session of this Society, was held at the house of the Royal Medical and Chirurgical Society, 53, Berners Street, on the evening of Monday, the 3d of November. Dr. Babington, the President, in the chair.

There was a very good attendance of members and visitors.

Several new members and corresponding members were proposed.

Dr. Babington read an address, in which, after giving an account of the proceedings at the ordinary meetings held during the last session, and of the progress made by the various committees now engaged in the special investigation of subjects considered by the Society to demand immediate attention, he alluded to the financial condition of the Society, which, although not yet emerged from the struggles of the infant state, had undertaken inquiries which of necessity involved considerable outlay. Dr. Babington, however, added that there were no grounds for despair. The interest and sympathy excited by the Epidemiological Society among the general professional public had been of no ordinary kind, and he felt assured that the active and enlightened benevolence of this country would not turn aside from an institution whose objects were wholly devoted to the benefit of mankind. At the conclusion of the address Dr. Babington was warmly applauded. The President then called on Dr. M. William to read a paper by Mr. Gardener, of Notting Hill, on small-pox and vaccination, founded upon an outbreak of small-pox at Mauritius in 1840. Of this paper we shall give an abstract in our next number.

Hospital and Infirmary Reports.

KING'S COLLEGE.

Stone in the Bladder—Lithotomy.

IN the treatment of cases of stone in the bladder there has been of late years a very great improvement; very much scientific and mechanical ingenuity has been employed by various surgeons for the purpose of simplifying the means which are necessary to be employed in the cure of this disease. The anatomy of the urino-genital organs, and of the structures connected with them, has been most carefully studied and elaborately discussed and pointed out, more so perhaps than any other single region of the human body; instruments which were of a complicated and awkward nature are now for the most part laid aside for those which are of more simple form and more adapted to the delicate and important tissues which they have to traverse; in fact, the surgeon now relies mainly upon his own knowledge of anatomy and manual skill to effect with safety the removal of a stone from his patient's bladder.

Although the operation of crushing a stone is now very much resorted to by surgeons in this metropolis, still the failures after this process have been such, and there is such a dearth of statistical data which might lead us to come to some correct conclusion as to the superiority or inferiority of lithotritry, that the old proceeding of lithotomy will, we expect, some time to come, be looked upon by many as the simplest and most satisfactory; at all events, such will be the case until those surgeons who have had large opportunities of performing lithotritry will give to the profession at large some pretty extensive and more satisfactory results than have hitherto been brought to light. As far as regards the operation of lithotomy as performed by the surgeons of the last, and of the present age, we have been furnished with abundant statistical data, and a pretty accurate conclusion has been arrived at respecting the amount of success which is attendant upon it. There have been some surgeons who have cut twenty, thirty, or forty patients even, without meeting with a single failure, but this result can be but rarely expected under the most favourable auspices; and if amongst a large number of cases of an operation attended with so many difficulties and dangers as lithotomy, the surgeon meets with an unfortunate result not oftener than once in seven or eight times, he ought to consider himself as

meeting with just such an amount of success as he could reasonably expect.

With respect to the operation of lithotrity it has hitherto been impossible to come to anything like a correct conclusion as to its real safety or danger, no extensive statistics having been yet published. Still, many cases have already been brought to light in which fatal results have ensued; and there is great reason to believe that many more instances where death has occurred, or where the operation had been entirely successful, have been buried in oblivion. One very strong argument, however, in favour of lithotrity consists in the circumstance that it is a favourite operation with several surgeons of experience and authority; and it is not possible that they would continue performing it unless they found it as successful as that of lithotomy, and even in our present uncertain knowledge of its actual results lithotrity will often be resorted to for more than one reason. In the first place, there are many patients of a timid nature, who have such a dread of the knife under any circumstances, that they will gladly catch at any measure which may prevent its use, even although it may be uncertain, and render them invalids for a long period of time. Secondly, there are perhaps some surgeons who from insufficient confidence in their own powers would decline to undertake the responsibility of cutting into a man's bladder, but will not have any hesitation in adopting a process which does not require so much anatomical knowledge and determination of mind, but which nevertheless calls for great tact and nicety in the handling of instruments, and to this a profound knowledge and acquaintance with the various pathological phenomena which occur in connection with the bladder and urinary passages.

Notwithstanding the success which we hope will at some future time be seen to attend lithotrity on a large scale, lithotomy will still continue to be resorted to in a considerable number of cases; for the same causes will obtain then which now exist to render the crushing process impossible or undesirable. In a very large number of cases of stone in the bladder the subjects of the disease are very young children varying from two to six years of age: a great proportion, indeed, is of that age, and in such instances lithotrity is not applicable, for in the first place it is almost impossible to pass an instrument sufficiently large and strong to break up a hard calculus. There would be great irritation set up by fragments of stone attempting to escape through so small an outlet as the urethra of a child: moreover, lithotomy is almost always attended with success in children; it is rare to

meet with a fatal case after this operation in a child, except when it has not been properly performed. It is, indeed, difficult to fancy, that even if the operation of lithotrity could well be adopted in children, that it would ever be attended with the same success as in the cutting process.

Then, in the adult, there are instances to be not unfrequently met with in which the stone in the bladder is so large as to forbid its being well embraced by the blades of the lithotrity forceps, and too hard to be effectually broken; and again, there are certain cases in which the urinary organs and urethra are in such an irritable condition that the patient cannot bear, without excessive pain and constitutional disturbance, the introduction of an ordinary catheter, much less of a full-sized lithotrite. In such instances it is highly undesirable to attempt to crush a stone, for if the operation be done, the patient will be very likely to lose his life after a train of most severe sufferings. In cases, then, of this nature, and in young children, it will be found necessary still to adopt the operation of lithotomy.

In order to illustrate these remarks, we shall relate two cases, each of which comes under the head of those we have just mentioned, as being exceptions to those where the operation of lithotrity could be applicable, and in which lithotomy would give the best chance of a successful issue.

In the first case the patient was a countryman, sixty years of age, a native of Yorkshire, who had always enjoyed capital health until a year ago, when he first began to experience at the neck of the bladder some uneasiness when he attempted to pass water, which he was obliged to do frequently. The stream of water was forked, and occasionally stopped altogether suddenly. He likewise had a great sense of irritation at the extremity of the penis: all these symptoms continued to increase, and he applied to a surgeon, who sounded him and detected a stone. He advised him to come to King's College Hospital, into which institution he was admitted at the latter part of September. Mr. Fergusson examined him with the sound, and discovered a calculus of considerable size; the urine was found to be slightly alkaline and contained a little pus. The urinary passages were in an irritable condition.

On Saturday, Oct. 4th, Mr. Fergusson performed the ordinary operation of lithotomy upon him, and extracted a stone of considerable size. The operation was performed without any complication, there was but little bleeding during or after the proceeding. On the next day the patient complained of some pain at the lower part of the belly, which became somewhat tym-

panitic; the urine passed away very freely by the wound: a turpentine stupe was applied to the belly.

6th.—Wound looking very healthy; pain in the belly has quite ceased.

10th.—The patient is improving most favourably; urine passes mostly by urethra; wound in the perineum healing rapidly. On the 17th the whole of the urine passed by the natural passage.

Charles Hibbert, aged three years and a half, was admitted into King's College Hospital from Yorkshire, with the symptoms of stone in the bladder. Mr. Fergusson sounded the patient and readily detected a stone. On Saturday, October 11th, chloroform having been administered to the child, Mr. Fergusson performed the usual operation of lithotomy, and extracted a calculus of the size of a sparrow's egg. The incisions were made cautiously and slowly, and Mr. Fergusson used very little force with the finger. In the evening there was some bleeding, which however was soon arrested; but the child became restless, complaining of great pain about the wound and lower part of the belly: he was ordered six minims of laudanum. On the next morning there was complete retention of urine, and consequently Mr. Cockburn, the house-surgeon, was obliged to pass a catheter into the bladder by the wound. The bladder was then injected with warm water, when a great deal of blood and clots came away. This treatment was obliged to be continued at intervals until Tuesday, on which day the urine passed freely by the wound without blood: the parts around this were somewhat puffy. The urine was alkaline, and there was a considerable quantity of mucus in it. For this condition the child was ordered to take three minims of dilute nitric acid three times daily. Since this period the patient has been progressing favourably.

In each of these instances we have an example of the propriety of adopting the cutting operation instead of lithotrity, for the cure of the stone. In the first case, the patient being an adult, those conditions obtained which might render the operation of lithotrity less favourable than that of lithotomy; the stone was of considerable size, and the urinary passages were irritable, when Mr. Fergusson examined the patient with the sound: these circumstances combined, induced that gentleman to perform lithotomy. Still it must not be supposed that lithotrity might not have been applicable here, for the stone which was not much larger than a chesnut might have been readily broken, and indeed calculi of much larger magnitude have been successfully broken up and passed away. The aspect, however, of the case altogether was such as

to induce the belief that it was one to which the operation of lithotomy would be best adapted.

The second is another and more striking example of the necessity of even yet continuing the operation of lithotomy. In a child of three years of age, and in those of a greater age, it is difficult to apply such instruments as would readily break up a stone, in consequence of the small size of the urethra, and even if this difficulty could be easily overcome, and the stone broken up, the after part of the treatment would be much more complicated than that in the case of the adult; for portions of calculi would be constantly sticking to the urethra, and the excessive sensitiveness which already exists in connection with young children labouring under stone in the bladder, would be changed into that state of irritation and inflammation which form the chief feature of difficulty and danger in cases of lithotrity. There is reason to fear that the mortality would be great in children if lithotrity could or would be generally adopted.

It has been stated that in operating upon the child Mr. Fergusson cut cautiously and somewhat slowly through the various textures into the bladder, using very little amount of force with the finger. This gentleman, when operating upon young children for stone, always employs a great amount of caution in getting along to the bladder, for, as he stated to the pupils after the operation, there is a very great likelihood of getting into trouble in operating for stone in young persons, in consequence of the slowness of texture of the parts and of the mobility of the bladder: the surgeon, after having made the preliminary incisions, may fancy that he has cut into the bladder, whilst he is in reality outside or in front of it; and by moving his fingers freely about on purpose to search for the stone a large space is made which very much gives the idea that the bladder is reached, whilst in reality that viscus is not yet entered. This unfortunate circumstance is to be best avoided by making the incisions very cautiously, and using no more force with the finger in dilating the parts than is absolutely necessary.

In this case also occurred after the operation a circumstance which is not frequently noticed after lithotomy, and which proves troublesome and painful, namely obstruction to the flow of urine from the bladder; the cause here was that which is generally remarked to be the same in analogous circumstances. Some deep-seated branch, which had been divided in the operation, had bled after the patient had been placed in bed, and the blood had, instead of coming out by the wound, flowed backwards into the

bladder, become coagulated there, and stopped up the outlet from that viscus, and thus retention of urine occurred. It is an unpleasant complication, as it necessitates the use of the catheter and the removal of coagulated blood, which sometimes is passed away spontaneously, but will occasionally require that the organ should be injected and washed out.

Correspondence.

SIX PAPERS ON THE CLASS OF MEDICAL LITERATURE MOST NEEDED IN THE PRESENT DAY. ADDRESSED TO MEDICAL STUDENTS. BY HORACE DOBELL, MEMBER OF THE ROYAL COLLEGE OF SURGEONS.

No. IV.

Foundation for the conclusion that inductive philosophy is the means required to supply the deficient knowledge in Medicine and Surgery—The effect of the ancient philosophy—its failure to produce new truths—this failure explained—three causes assigned—its effect upon the general progress of science witnessed in the succeeding period—The means by which discoveries in science have been made—examples—The discovery of the circulation by Harvey an inductive act, &c.—Comparison of the state of knowledge and of the human intellect at the present time with their state in the “philosophical period”—commenced—Object of this comparison explained.

I HAVE stated my conclusion—that inductive philosophy is the means required to supply the needed knowledge in medicine and surgery—to be founded on the experience of the past, and I will endeavour to show the nature of this foundation. I derive the support chiefly from three sources. First, the effect of the ancient philosophy; secondly, observation of the mode in which great discoveries have been made in medical science since that time; thirdly, comparison of the present state of medical science and of the human intellect, with their state during the “philosophical period.” I must say a few words under each of these heads; and first, of the effect of the ancient philosophy. It may appear to some that I have already stated sufficient on this point in quoting Dr. Whewell’s opinion, that the Greek philosophy was a complete failure; but this is not enough. Dr. Whewell speaks of the attempt made to advance science, the effect of the labours of Aristotle and his cotem-

poraries in their application of inductive reasoning, and this he states to have been equal to no effect at all; the sciences neither retrograded, nor did they advance, during the “philosophical period;” therefore the failure in this sense is clearly proved. But there is another very important view of the matter which we have not yet considered; one which, I think, should always be taken when considering the history of periods: I mean, a view of the effects of the Greek philosophy, not as to whether it answered the end for which it was adopted, not as to the correctness of theories then constructed, or the truth of axioms then held,—but a view of the Greek philosophy in the aggregate,—of all the philosophers, all their systems, all their failures, and all their successes, classed together as constituting the “philosophical period” in the history of the sciences, and of medical science in particular. Now, as the effect cannot be coincident with the cause, but must follow it, if we wish to learn the effect of the “philosophical period” we must not examine that period, but the one which succeeded it; and it is extremely interesting to do so in the present case, for the effect so forcibly arrests our notice,—*That which followed the “philosophical” was the “anatomical” period.* The effect of the failure in philosophy was to call for anatomy; and from this we learn that those who for 180 years had employed such noble talents in endeavouring to improve a science by reason, had, by the endeavour, pointed out that the materials for that reason to work with were yet deficient. It is a common opinion, and has also been held and supported by those who have studied the subject, “that the Greeks disregarded experience, and spun their philosophy out of their own thoughts alone; and this is supposed by many to be their essential error,—that the chief cause of their failure was the neglect and ignorance of facts.”* Now, with respect to the sciences in general, we cannot doubt that many facts were wanting; that, indeed, all those were deficient which have been discovered since. So far, the refore, there certainly was an ignorance of facts; but I do not think we can justly accuse the Greeks of neglecting facts; but, on the other hand, we see by their works that they were most sedulous in collecting and arranging all that they then knew: and this opinion is expressed by Dr. Whewell. He says—“I will first notice some errors which may naturally occur to the mind as possible causes of failure, but which we shall be able to show were not the real reasons in this case. The cause of failure was not the

* History of the Inductive Sciences, by the Rev. W. Whewell, M.A., vol. i. p. 73: Parker, 1837.

neglect of facts." "I conceive," he says, "it may be shown that the Greek philosophy did in its opinions recognise the paramount value of observations, did in its origin proceed upon observed facts, and did employ itself to no small extent in classifying and arranging phenomena."* Again, he says—"Since, as we have said before, two things are requisite to science—facts and ideas; and since, as we have seen, facts were not wanting in the physical speculations of the ancients, we are naturally led to ask, were they then deficient in ideas? was there a want among them of mental activity and logical connection of thought?" "But," he continues, "it is so obvious that the answer to this inquiry must be in the negative that we need not dwell upon it." . . . "We come back again, therefore, to the question, what was the radical and fatal defect in the physical speculations of the Greek philosophical schools? To this Dr. Whewell answers—"The defect was, that, although they had in their possession facts and ideas, the ideas were not distinct and appropriate to the facts. There can be no difficulty in conceiving that for each class of facts there is some special set of ideas, by means of which the facts can be included in general scientific truths, and that these ideas, which may thus be termed appropriate, must be possessed with entire distinctness and clearness, in order that they may be successfully applied. It was the want of such ideas, having a reference to material phenomena, which rendered the ancient philosophers, with very few exceptions, helpless and unsuccessful speculators on physical subjects."† That something in addition to facts and ideas was needed is readily proved by referring to some of the simpler problems in mechanics and dynamics which the ancients failed to solve, yet upon which they possessed all the facts which have since enabled philosophers with a more appropriate set of ideas to solve without difficulty. But to this deficiency of appropriate ideas must, I think, be added the following explanation of the failure of ancient philosophy, which includes the deficiency pointed out by Prof. Whewell, and goes far to explain its cause. The labours of the ancients were directed to a different end from that which we desire to reach; they bent their bows with vigour, but pointed their shafts in a direction distant from the mark which should have been their aim, and let them fly at one which could never be attained. In his essay on Bacon, Mr. Macaulay has illustrated this with his usual aptness. "In truth," he says, "the very admiration which we feel for the eminent phi-

losophers of antiquity forces us to adopt the opinion that their powers were systematically misdirected. For how else could it be that such powers should effect so little for mankind? A pedestrian may show as much vigour on a treadmill as on the highway road. But on the road his vigour will assuredly carry him forward, and on the treadmill he will not advance an inch. The ancient philosophy was a treadmill, not a path. It was made up of revolving questions of controversies, which were always beginning again. It was a contrivance for having much exertion and no progress . . . "Where this philosophy was in the time of Cicero, there it continued to be in the time of Seneca, and there it continued to be in the time of Favorinus. The same sects were still battling with the same unsatisfactory arguments, about the same interminable questions. There had been no want of ingenuity, of zeal, of industry; every trace of intellectual cultivation was *there except a harvest*."* Neither did the ancient philosophers neglect the study of natural science, "but they did not cultivate it for the purpose of increasing the power and ameliorating the condition of man."† "It was considered in the light merely of a mental exercise."‡ "It was made subsidiary to the art of disputation, and it consequently proved altogether barren of useful discoveries."§ From this general censure even the Epicureans cannot be excepted, for, notwithstanding the high value which they placed upon mere sensual enjoyments, referring all happiness to bodily pleasure, and all evil to bodily pain, they neither exerted themselves to better their own physical condition, nor expected any more improvements in the arts which conduce to the comforts of life.

"Ad victum quæ flagitat usus
Omnia jam ferme mortalibus esse paratâ"

were the words of their great poet.

Supposing, therefore, that the ancients had possessed a sufficient number of facts, and a sufficient number of ideas, and even the mental power necessary to give these ideas an appropriateness to the fact; having set up as the goal of their philosophy a castle in the air, we can readily understand that to us, who seek for the temple built upon a rock, their ideas must appear perfectly inappropriate.

These appear to have been the radical and fatal causes of failure in the ancient philosophy, when applied to *subjects upon which all the necessary facts were possessed;*

* Lord Bacon. *Critical and Historical Essays*, by T. B. Macaulay. London, 1851.

† Ibid.

‡ Ibid.

§ Ibid.

* Ibidem, vol. i. p. 73.

† Ibidem, vol. i. p. 79.

and satisfactorily explain how it happened that such powerful and active minds drew no new truths from the same sources which have since yielded luxuriant harvests. But we must not forget that *deficiency of facts themselves was on most subjects a sufficient obstacle to the discovery of new principles*, and that in medicine and surgery this was particularly the case. Therefore we must assign these several, though intimately connected causes, for the failure of the Greek philosophy—

1st. A mistaken notion of the proper objects of philosophy.

2d. A deficiency of facts on most subjects.

3d. A deficiency of appropriate ideas connected with the facts possessed.

It will be shown, at a future page, when I treat of the past and present state of medical science, that the deficiency of correct facts was certainly immense in this department of knowledge; and the circumstance already referred to—of the “philosophical period” being immediately followed by the “anatomical,” in my opinion confirms the correctness of this assertion. I wish to call particular attention in this place to the fact, that although the Greek philosophy failed to produce new truths in medical and surgical knowledge, and therefore failed to attain its proper object, yet it contributed largely to the advance of our science in the end. And the manner in which it did so was this:—*It caused to be brought together the facts then possessed in medicine and surgery*: this being done, the philosophers who failed to draw new truths from them discovered that they had not yet the materials for their philosophy: that they were deficient in the necessary facts. They thereby pointed out to the world what were the necessities of the sciences they studied. It is evident that the want of a proper object, and of appropriate ideas, would not be detected by the philosophers in whose minds the deficiencies existed; but the absence of facts would be even exaggerated by them, in their endeavour to account for their ill success. Succeeding ages have discovered that the cause of failure was compound, but the sages of the “philosophical period” proclaimed the absence of sufficient and correct facts; and they were answered by the succeeding generations in the attention then devoted to anatomy. Hence we see that the effect of the “philosophical period” was the ultimate advancement of medical science.

The next support we gain from experience in the past is from observation of the manner in which discoveries have been made: this is a part of the subject replete with interest, but, unfortunately, one

which would occupy so much space, if treated at length, that it must be here passed over unsatisfactorily—only a few illustrations being given. Empedocles, a philosopher, poet, historian, and physician of Agrigentum, in Sicily, by the skill which he possessed in medicine and in natural philosophy was enabled to perform many feats, so wonderful, in that time, that he passed them upon the minds of the superstitious and credulous multitude as miracles; so that when he appeared at the Olympic games he became an object of universal attention. From time immemorial pestilential fevers had periodically ravaged his native city. He observed that the appearance of these fevers coincided with the return of the south-east wind Sirocco; and the constancy with which the return of the Sirocco was followed by the appearance of the pestilence, led Empedocles, accustomed as he was to philosophise, to connect the two facts in his mind by an act of reason, and to conclude that the pestilence was caused by the wind. From this point he proceeded to the next step in his reasoning,—that to remove the wind from Agrigentum would put an end to the fevers: he accordingly had a wall of great height built round the south-east side of the city, with the desired effect; and it is reported, by M. Brayer, in his work on Constantinople,* that the wall still stands, and that Agrigentum is free from pestilence. This fairly exemplifies the discovery of the cause of disease by inductive reasoning.

The circumstance of discovering that diseases might be caused by states of the atmosphere, directed the ideas of Empedocles into an improved course; and we shall see by the following anecdote that certain facts being presented to him, they found in his mind appropriate ideas, and the essentials of philosophic reasoning being established, he was successful in their application. The inhabitants of the city Selinus, in Sicily, were a prey to an endemic disease, and having heard of the fame of Empedocles they begged he would liberate them from what they considered to be a curse. The philosopher accordingly visited Selinus, his mind lately impressed with the fact that the atmosphere may become a cause of disease, and his ideas all influenced by the new discovery. Upon visiting the city his first care was to make himself acquainted with every fact relating to it; and the working of his mind must have been something after the following manner:—He had failed to discover any coincidence between the appearance of the disease and any particular wind, but still he returned to the idea of an

* Neuf années de séjour à Constantinople, par le docteur Brayer.

atmospheric cause, and he remembered that the air is an influence to which all are alike exposed, therefore any effect produced by it will be common to all; and the endemic in question he found to be universal. But, he must have continued, the natural air is not injurious to health; therefore it must contain some foreign property to render it a cause of disease. This is possible, as in the case of the Sirocco wind at Agrigentum: but there is no particular wind to refer to in this case; therefore, if the air be impure, from what source is it infected? Seeking again for some new fact in answer to this question—some existing source of impurity—the only object which arrests his attention is the river Selinus surrounding the city:—he observes that the current of this river is so slow that the waters become stagnant; that its banks are thickly covered with vegetation, and that the stream is clogged with decaying matters: here, he fancies, may be a source of the impurity; for the vapours from the putrid river may rise and infect the air. Still something is wanting to complete the proof in his mind. He makes further observation; discovers that during the summer months the river's current is impeded, and the gases rising from it unusually abundant: he finds by inquiring that there is a coincident augmentation in the severity of the disease at these periods: he recollects the coincidence between the return of the Sirocco and the return of the pestilence, and decides at once that the cause of the endemic at Selinus is the slow current of the river in its neighbourhood. And it is a fact in history that Empedocles had two other rivers conducted into the bed of the Selinus; its current was thereby accelerated, the stagnant vapours ceased to rise, and the endemic disease never returned. This, again, is a simple but correct example of the discovery of the cause of disease by inductive reasoning.

It may not be generally remembered that the discovery of the circulation of the blood was entirely an inductive act, depending wholly upon the philosophic tendency of Harvey's mind, and its application to facts already known. Aristotle observed that the termination of the veins was in the heart. Galen remarked the anastomoses between veins and arteries through the capillaries. Sylvius observed the existence of valves in the veins. Servetus and Realdu Columbus discovered that the communication between the right and left sides of the heart was through the lungs. Andrew Cæsalpinus remarked the swelling of veins below ligatures, and inferred from it a reflux motion of the blood in these vessels. Fabricius observed that the valves of veins all turned towards the heart—was acquainted with the existence of valves in

the heart, and the absence of valves in the arteries—yet he did not discover the circulation of the blood, and still held the absurd notion that the arteries were filled with air, or "vital spirit," as it was called. The glory of discovering the circulation was left for William Harvey. "So true is it," says Cuvier, "that we are often on the brink of a discovery without suspecting that we are so." "So true is it," observes Dr. Whewell, "that a certain succession of time and persons is generally necessary to familiarise men with one thought before they can advance to that which is next in order." The course of the discovery is thus described by Professor Whewell:—"William Harvey, after making his studies at Cambridge, went to Padua, and became a pupil of Fabricius. In this city, excited by the discovery of the valves in the veins, which his master had recently made, and reflecting on the direction of the valves which are at the entrance of the veins into the heart, and at the exit of the arteries from it, he conceived the idea of making experiments in order to determine what is the course of the blood in its vessels. He found (as Cæsalpinus had done) that when he tied up veins in animals they swelled below the ligature, or in that part farthest from the heart, while arteries with a like ligature swelled on the side *next* the heart. Combining these facts with the direction of the valves, he came to the conclusion that the blood is impelled by the left side of the heart in arteries to the extremities, and thence returns by the veins into the right side of the heart. He proved also that the circulation of the lungs is a continuation of the larger circulation, and thus the whole doctrine of the double circulation was established." Thus we see it clearly illustrated that observation alone is not sufficient for the discovery of causes of disease, or of principles in science. The discovery of the circulation of the blood is due to an act of inductive reasoning excited in the mind of Harvey by a review of numerous facts *already well known*.

Cuvier's application of the principle of the conditions of existence in animals* is another example of discovery, the result of reasoning upon collected facts.

I must now pass on to the third and last of the sources of support under consideration—viz., a comparison of the state of knowledge and of the human intellect at the present time, with their state in the "philosophical period." The object of such an examination may be readily demonstrated. I have stated it to be my persuasion that great progress in medicine and surgery may be made in the present age by the application of inductive reasoning. I

* "Theory of the Earth."

have pointed out that, although the philosophy of the ancients in these branches of knowledge was in the end to their advantage, yet that it completely failed to attain its proper object of producing new truths. I have also shown the causes of this failure. It is my duty, therefore, to explain my reasons for expecting, in the present day, such great success from the same source which proved fruitless in a past age. Knowledge is the material, and the human intellect the ruling power, by which combinations and changes in the material are to be directed. Knowledge and the human intellect are, therefore, the two elements from the combined action of which we expect the production of new truths; hence it is proper to compare the condition of these elements in the present day, with their condition in the days when their combined action failed to produce those truths we now expect from them. Professor Whewell says, "to the formation of science two things are requisite,—facts and ideas, observation of things without, and an inward effort of thought; or, in other words, sense and reason. Neither of these elements, by itself, can constitute substantial general knowledge. The impression of sense unconnected with some rational and speculative principle can only end in a partial acquaintance with individual objects. The operation of the rational faculties, on the other hand, if allowed to go on without a constant reference to external things, can lead only to empty abstractions and barren ingenuity. Real speculative knowledge demands the combination of the two ingredients—right reason, and facts to reason upon.* I must attempt to show what supply of facts on subjects connected with medicine and surgery there was in the "philosophical period," and what is the comparative supply of facts on these subjects at the present day.

It is curious to observe, that, during the whole history of medicine and surgery, comprising a lapse of more than 3000 years, there has been only one period characterised by attempts at philosophy; and that this period lasted only 180 years. Some idea of the collection of facts then possessed may be gained by observing the date of this epoch, and what had been the character of those which went before. Now it will be remembered that, according to the plan which I have adopted, the history of medicine and surgery is divided into eight periods. The "philosophical" forms the third of these, the third of the four epochs which constitute the first age, or "age of foundation." The space of time previous to the attempts at inductive reasoning was not very ample for the obser-

vation and collection of correct facts. Of the two periods which precede the "philosophical," the first is the "instinctive," and comprises an indefinite number of years; in the beginning of which, through the influence of that instinct which, as Plato says, "teaches men to flee from sorrow and death," the art of healing was conceived; and during which it reached a certain stage of development in its embry existence. The second is the "mystic or sacred," and includes the days when the practice of medicine was in the hands of the priests, and exclusively confined to the temples, the law of the Asclepiades being that "it is not permitted to reveal the holy things to any but the elect, and that strangers are not to be admitted to this knowledge until they have submitted to the trials of initiation." The treatment employed by the Asclepiades was prescribed upon no safer grounds than those of the purest empiricism, their only guide being what little experience they had at command, and having continually in their mouths, as an historian has said, these words, "I have seen quite a similar disease cured by such or such a remedy;" this reasoning being based upon an incontestible principle, viz., that any medicine which has cured a disease ought equally to cure maladies analogous to the first. But when we come to learn *what* means, *what* evidence they had, from which to decide upon the identity of diseases, or the similarity between two disorders, we shall see how likely the doctrine was to answer in its application. The records of all diseases treated by the Asclepiades were inscribed on tablets, at first hung about the walls of the temples, and afterwards arranged in classes for more convenient reference. Some idea of the contents of these tablets has been gained from one of them found at Rome, in an island of the Tiber, formerly the site of an Æsculapian temple. The following are some of the inscriptions which were engraved on the tablet:—"These last days a certain Caius, who was blind, having come to consult the oracle, the deity answered, that he must first prostrate himself before the sacred altar, to make his adorations. Then he passed from the right to the left, and having stretched his fingers upon the altar he raised his hand, and applied it to his eyes. He soon recovered his sight in the presence of the people." 2. "Lucius was attacked with a pleurisy, and everybody despaired of his life. The deity of the temple ordered him to take some cinders from the altar, to mix them with wine, and to apply it to his side. He was saved, and returned thanks before the people." 3. "Julien ejected blood from the mouth; he appeared beyond hope: the oracle ordered him to take from the altar

* Professor Whewell, op. cit., vol. i. p. 6.

some pine seeds, and to eat some honey for three days. He did so and was cured, and having returned thanks he went his way." 4. "The deity gave this order to a soldier, named Valerius Aper, who was blind: "Take some blood of a white-cock, mix it with some honey, and make a collyrium; with which bathe your eyes during three days. The soldier, having obeyed the orders of the oracle, recovered his sight."

Such is a specimen of the ancient mode of taking cases, as far as may be judged from the temple tablets. Some historians have presumed that the Asclepiades kept private notes in a more careful way, but of this we have no proof. The amount of knowledge to be gained from such as I have quoted is very easily calculated. It is well attested that the priests did employ purgatives, emetics, baths, frictions, and mineral waters, but their principal confidence was placed in the good effects of the pure air of the localities in which the temples were built, the careful regimen, and the mysterious influence of the deity, *Æsculapius*.*

[To be continued.]

ON BANDAGING THE ABDOMEN AFTER DELIVERY, AND THE PROPER TIME FOR APPLYING THE BANDAGE.

SIR,—In the number of your valuable journal dated Sept. 12th, there is a paper "On bandaging the abdomen after delivery," by Mr. Kesteven, in which he states his belief "that the opinion upon the importance of the binder, generally entertained, has originated in the *"nimia diligentia medici,"* who therein performs the office of the nurse:" he goes on to say, that "bandaging the abdomen immediately after delivery is not only unnecessary, but in many cases absolutely injurious;" and that "any advantages it offers are to be gained by its employment at a later period than generally directed." Mr. Kesteven goes on to say, that "men of large experience, and of well-merited reputations, attach great importance to the early application of the bandage," and that "he would not have dared to call in question the soundness of such undoubted authorities," did he not believe "that more mischief than benefit is derived therefrom:" "he trusts that the facts and reasonings now to be adduced will satisfactorily account for his dissent, and defend him from the charge of promulgating a *dangerous heresy*." As Mr. Kesteven is aware "that the weight of authority

is against the opinion which he now advances, he will not be surprised that one who thinks differently on this most important point should venture to answer some of his objections to the use of the bandage.

He arranges the consideration of the subject under three divisions:—"1st, the alleged objects to be gained by the bandage; 2ndly, its real effects; 3rdly, its proper object, and the right period for its application."

The 1st of these divisions he separates into five clauses, α , β , γ , δ , ϵ ,—which I shall consider separately.

α . "In the vast majority of cases the uterus contracts rapidly, firmly, and permanently, directly upon delivery, without bandaging." True that such is the case: were it not so, how much more frequent would dangerous flooding be than it really is: should the uterus not contract well and firmly, no bandage will make it do so: it is, then, the duty of the practitioner to support the uterus with his own hand, and to follow down the contraction of the organ till it is firmly contracted under his hand, and to maintain the pressure till the contraction is permanent. So long as he feels the slightest tendency to relaxation, it is his duty manually to support the organ, and not to leave it to apply a bandage, or compress, or any other apparatus; but when such a contraction is obtained, the judicious application of the bandage renders the requisite support as efficiently as the hand of the practitioner; and, if such be the case, why do away with that which at once enables the attendant to leave with the assurance that internal hæmorrhage and distension of the uterus cannot take place to any great extent, and secures the patient against, if not a dangerous, at least an unnecessary, loss of blood? Mr. Kesteven goes on to say, that "the poor women who are delivered by midwives, and the hundreds, aye thousands, who are yearly delivered without any aid, would, were it not so, have all the dangers of uncontracted uterus to contend with." Fortunate, indeed, it is for them that good contraction does generally take place; but in those cases where the contraction is not firm, and where the uterus has a tendency to relax, and where hæmorrhage is the result of such relaxation, he would at once do away with the best preventive that art can afford. I must beg to differ from him in opinion that hæmorrhage is unfrequent among the poor; that alarming and fatal hæmorrhage is, I am ready to allow; but I am of opinion that large drainings are common. How many are the cases of pale, wan-looking women, who date their weakness to having "lost much" in their confinements, and afterwards, where a well-

* ERRATUM.—In MED. GAZ. for October 24, p. 736, col. 1, line 28 from top, for: "Thirdly, the change in the colour of the crystals from white to scarlet; fourthly, the result of the change, viz. the formation of chloride of potassium," read "Thirdly, the change, viz. the formation of scarlet crystals of biniodide of mercury."

applied bandage would have prevented the miseries so entailed? Many cases have come under my care with the history of considerable "loss" in their previous labours, in which, with pressure firmly applied on the uterine tumour during the infant's passage in the world, and continued till a firm contraction was obtained, the slightest amount possible of blood has been lost. In these cases, the bandage carefully applied has served well to maintain that gentle support which is at once grateful to the patient, and prevents her from being troubled with severe after-pains.

β. "That measure which shall promote the contraction of the uterus can hardly be seriously recommended as a means of lessening the severity of the after-pains; the contradiction is too manifest to require further comment." Now I would ask, upon what cause do after-pains depend? They depend on the continued contractive efforts made by the uterus to expel any portion of the placenta or membranes, or any clot of blood that may be retained in its cavity; and, in the cases where after-pains are most severe, the discharge is more abundant, clots coming away at intervals. Of course, it is the duty of the medical attendant, by examination of the placenta and membranes, to assure himself that no portion of either is left behind. This being ascertained, these cannot be the cause of after-pains: then, if proper pressure and support be given by the hand to the contracted organ for a few minutes, it will remain in that condition, and then a bandage judiciously applied will keep up the support which is required to prevent the uterus from relaxing; will guard against any clots forming in its interior; and, consequently, prevent the after-pains, the necessary indications of the expulsive efforts of the uterus. This, of course, is a matter which cannot be judged of by a person who is in the habit of leaving off the bandage altogether, or leaving its application to the care of ignorant and uneducated midwives; but I can only say, from what information I gathered by careful examination and enquiry from the inmates of the Rotunda Hospital, Dublin, where proper support and the due application of the bandage are inculcated as an absolutely necessary part of the treatment, and from what I have observed in my own practice since, that the comfort given to, and the immunity from after-pains enjoyed by the patient, are almost incredible.

γ. For the prevention of hæmorrhage immediately after delivery, and immediately after the expulsion of the placenta, I perfectly agree with Mr. Kesteven, "the application of a roller certainly possesses no claim." Indeed, I can only think that the application of this means of support during

puration, to be gradually tightened as the expulsion of the infant takes place, although recommended by Dr. Merriman, is a very clumsy substitute for that pressure which can be so well and effectively applied by the left hand of the accoucheur; and should the bandage have been applied, there can be no question that it must be removed immediately that hæmorrhage takes place, in order that the usual remedies for arresting it may be applied.

That improperly bandaging the hypogastric region with pads, &c., may frequently give rise to hæmorrhage, I cannot doubt; for, supposing such pressure to be applied in the above mentioned region, in a spot between the fundus of the uterus and the symphysis pubis, unquestionably the effect of such pressure would be mischievous in the extreme; since the pressure would then be directed against the front wall of the uterus, and not on the fundus. The effect of such a proceeding can be nothing else than to "mess" the uterus across the middle, and, should there be a tendency to relaxation, to produce an irregular contraction of the walls of the organ, perhaps an *hour-glass* contraction, and so be the cause, if not of hæmorrhage, of leaving the uterus in anything but a safe condition.

δ "To prevent Syncope."—For the syncope which sometimes occurs during the process of labour I am unable myself to see that the bandage can be of any service; since, at this period, syncope does not depend on the removal of the pressure from the abdominal vessels; but, when it occurs after delivery, I am of opinion that common sense as well as the highest authorities indicate that this means, with other remedies for the removal of syncope, is calculated to give, as far as possible, the mechanical support which has been removed at the birth of the child,—and, to quote Dr. Ramsbotham, p. 610, 1st edition, "The liberal admission of fresh air, placing the head and shoulders rather below the level of the other parts of the body, the exhibition of small doses of stimuli, the application of warmth to the extremities, abdominal friction, and, especially, the adaptation of a properly contrived broad bandage girt tightly round the person, seem to offer the most effectual means of restoring the tone of the circulating system."

Proceeding to the second division of the subject—viz.—"The real effect of bandaging the abdomen after delivery,"—Mr. Kesteven says—

α. "It affords support to the abdominal walls, if applied moderately firmly."

β. After alluding to the preservation of the figure, &c., he enumerates, amongst its more injurious effects, "its aggravation of after-pains."

Of this I have already spoken, as also

of the irregular contractions asserted to be produced, and of its obstruction to manipulations." I am quite at a loss to imagine how the application of a bandage can in any way interfere with the action of the diaphragm; and as the manner in which it would be likely to do so is not even hinted at, I may regard this as a hypothetical rather than a real objection to it.

That the tightest application of the simple bandage can in any way displace, or cause obliquity and prolapsus of the uterus, I utterly deny; for the form of the pelvis alone prevents the pressure of the bandage acting on any part but the fundus, and I think it has been already shown that pressure there causes regular contraction, and not displacement in any direction. With regard to its interfering with compression of the aorta in cases of hæmorrhage, as I before stated, the bandage should not be applied till the patient has a well-contracted uterus; consequently, the necessity of pressure on the aorta would be done away with.

That the application of the bandage should have fallen into disrepute, in the hands of some practitioners, I do not wonder, for it is the practice of many, after the expulsion of the placenta, not to trouble themselves at all about the condition of the uterus. Every body knows that this organ has, in some cases, and in some persons more than others, a tendency to relax and form a clot in its interior, without manifesting itself externally: in these cases the application of the bandage generally causes the clot to be expelled: the practitioner is alarmed, and ascribes the hæmorrhage to the bandage; whereas, in truth, it acts as the safeguard of the woman, by causing that contraction which the practitioner has neglected previously to secure, and partial or total expulsion of the clot, as the case may be: if it be partial, there will be a continuation of the contractions, and consequently severe after-pains: the total expulsion requires a good contraction, and so there are few if any.

Persons may and do think differently as to the experience of hospital nurses; but with me the testimony of such persons carries considerable weight, especially when corresponding with that of more educated observers. Such being the case, I may be excused for stating what I was told by a nurse of 25 years' standing in the largest Lying-in Hospital in the United Kingdom—the Rotunda Hospital, Dublin. This person told me that in her earlier days the careful application of the bandage was not much attended to, and cases of flooding were not at all uncommon; but that since the bandage had been properly applied, such cases are of the rarest possible occurrence, and, indeed, almost unknown.

Thus, then, we find the right period for the application of the bandage to be after a good contraction has taken place: the object of it is to avert the tendency, which sometimes exists, to relaxation, after this contraction has been duly obtained; and it has been one of my objects in writing this letter to prove that it has this effect.

A few words, in conclusion, upon the bandage, and its mode of application.

The material best for the purpose is unbleached calico, doubled; the length must vary according to the size of the pelvis; it should be long enough to go round once, and have a foot to spare; its depth should vary from 15 to 18 inches; the pins used to fasten it should be short and very stout: to be of service, it must be applied next to the person, without any intervening linen. The bandage should be passed under the patient, disturbing her as little as possible; the lower edge must reach below the trochanter major; the patient should lie on her left side, her legs down and in as straight a position as she can. The bandage must then be tightened, and pinned below the trochanter: this is most important, since upon it depends the remaining of the bandage in its proper place: the second pin should be placed in a line with the former, about two inches below the crest of the ilium: this is a much less important one than the first and the third; the latter should be inserted in the interval between the crest of the ilium and the last rib, and before its insertion the bandage must be drawn as tightly as possible. The effect of this is to draw a tight band across the abdomen, on a line with the crests of the two iliac bones, and so to support the fundus of the uterus, and form an effectual barrier to its rising out of the pelvis by relaxation. The fourth pin is a very unimportant one, and is merely applied to make the upper part of the roller sit comfortably about the lower part of the chest.

My object in stating the uses of the bandage thus at length, are, to counteract the effects which the promulgation of such opinions as those advocated by the author of the paper "on bandaging the abdomen after delivery" is calculated to have on the practice of young men who have not had opportunities of judging its effects for themselves; and also to show that, to be of use, it should be applied after a firm contraction of the uterus has taken place, and in the manner above described.

Hoping that you will be able at an early period to give this letter place in your columns,—I have the honour to be, sir,

Your obedient servant,

C. H. ROPER, M.R.C.S.

30, Magdalen Street, Exeter,
October 7th, 1851.

ASYLUM FOR IDIOTS.

THE autumnal election of persons into this asylum took place at the London Tavern, on the 30th October. The unfortunate and pitiable objects who were deemed eligible to become candidates numbered 164, out of which only 15 could be elected.

Sir G. Carroll, on taking the chair, expressed his gratification that the institution was gradually progressing, and that year by year it was enabled to open its doors to those afflicted creatures, whose health, comfort, and, if possible, restoration to reason, it made its special care. He was convinced that there was a large number of benevolent individuals who only required to have their attention drawn to this good charity to induce them to support it to the utmost. There were now two large asylums in connection with the charity, which required great care and unwearied attention—almost every separate case involving the necessity of a distinct treatment. He wished the public would visit those institutions, and see the improvement that they were enabled to effect in the condition of the hitherto helpless idiot. It had come to his knowledge only that day that one of the parents had gone down to the asylum at Colchester a short time since, and who had not seen his son for 12 months before, actually did not know his own child, so great was the improvement. The great want which the society now experienced was a large establishment where they could classify a great number of patients, for which purpose 10,000*l.* was required.

Dr. Reid read the annual report. It was an extremely interesting document, but many of the details which might engross the philanthropist we must necessarily omit. There were at present in the institution 180 patients, which, with the 15 to be elected, would make 195. Physical training had the first place among them; and all the arrangements for bathing, shampooing, and gymnastic exercises, had been improved. In the schools there were classes for reading, writing, figures, natural and scriptural history, singing, drawing, and music; and, besides these, there were classes of gardeners, carpenters, shoemakers, basketmakers, knitters, and netters. On the subject of the success which had attended the operations of the society (and with regard to which, at its formation, grave doubts were entertained), the report stated that among those originally placed under the care of the board from the commencement, three years ago, there had been 25 unable to walk, 114 unable to feed, dress, or take care of their persons, 20 epileptic, 12 paralyzed, 68 dumb, and 25 under nine years of age, all subjects of physical infirmity and mental imbecility. So helpless and unpromising

family had perhaps never before been brought together. Of these 6 had been taught to walk, and 14 much improved in the use of their limbs, 27 who had been dumb or made strange and unmeaning noises were getting the use of articulate sounds and beginning to speak; 48 had been taught to feed and dress themselves, and to observe cleanly habits; 23 had been taught to read, 27 to write, 11 to cipher, 16 to draw. Some were taught music, nearly all singing, and most of them were in the drilling or gymnastic classes; 90 could attend with propriety on domestic, and about 50 on public worship, and had pleasure in doing so. Order had been established, good habits had been formed, and there were health and happiness among them. "May not, then," concluded the report, "the movement, as one of experiment, be considered as complete? and may it not from this day be pursued as one of clear certainty, unquestionable duty, and national importance?"

A long report was appended from Drs. Connolly and Little, and Mr. Callaway, M.R.C.S. the medical officers of the institution. Without committing themselves to any very strong expression of their impressions and feelings, they gave utterance to their perfect satisfaction at the progress of this "great attempt," and their lively belief, founded on careful observations, that the grand design of the founders would be eventually and completely fulfilled. The receipts of the year for general purposes had amounted to 8,104*l.* 7*s.* 4*d.*, and the expenditure to 7,449*l.* 14*s.*, leaving a balance of 654*l.* 13*s.* 4*d.* The receipts towards the building fund had been 2,229*l.*, of which 1,500*l.* had been invested, and 640*l.* remained in the treasurer's hands.

The election then commenced, and terminated at three o'clock, when the names of the successful candidates were announced.

CASES OF POISONING BY CORROSIVE SUBLIMATE. BY DRS. COALE AND JACKSON.

1. ON the 14th January, 1850, Dr. Coale prescribed for a patient ten grains of Calomel (Hydrargyri Submuriat. gr. x), and by mistake corrosive sublimate was sent. Dr. Coale saw the patient on the day following, and found that the poison had been mixed and partially swallowed, but the great distress it caused produced ejection of much of it from the stomach. By advice of the apothecary, warm water had been given. Dr. Flint had been sent for, arrived soon after, and administered the usual remedy of white of egg. He remained with Mr. H., the patient, for some time, until he felt it safe to leave, and called again in the morning. Dr. C. found Mr. H. vomiting a clear fluid like water mixed with fresh blood, and suffering much pain in the re-

gion of the stomach. Taking it for granted that Dr. Flint in his two visits had administered all the antidotes required, he took measures to combat the immediate symptoms occasioned by the corrosiveness of the poison, giving twenty drops of laudanum, and recommending ice cream. In the evening he found the vomiting had ceased, and the patient was very comfortable.

The case ended fatally on the 25th July, i. e. eleven days after the poison had been taken. The most troublesome symptoms were hiccough, vomiting, great exhaustion, and pain while swallowing. There was no salivation, but there was an entire suppression of urine, absence of fever, of tenderness over the epigastrium, of frequency of pulse, also of any appreciable lesion after death.

2. In a second case, communicated by Dr. Jackson, death occurred on the 13th day. The patient was a married woman, twenty-five years old, who took one teaspoonful of corrosive sublimate with laudanum, for a suicidal purpose. She took the poison at about eleven o'clock A. M., and was found at about one, in the privy, vomiting and purging, with constant retching. There was pain in the epigastrium, and a sense of burning and smarting in the throat. The symptoms continued gradually improving for four days, when she became able to keep drinks down, and was sufficiently comfortable. Continued confined to her bed for about a week, and Dr. Chapter thought she would recover; took farinaceous food: pulse 40, weak, bore pressure on epigastrium. On the eleventh day, she became worse; there being distress and restlessness; no return of vomiting, but some looseness of bowels with pus in dejections. Sank, and died on the 13th day. There was never any fever; was very pale, cool, with a look of prostration. Did not complain of debility till after the week of relief, i. e., the eleventh day. Condition of urine not noted. No autopsy allowed. The quantity of poison taken was, according to the apothecary, sufficient for a pint of rum to be used as bed-bug poison.

3. A third case is reported by Dr. H. W. Williams, in which the poison was taken in solution. Dr. W. states, I was called about noon on Monday, 12th August, to see L. B. R., aged 42, mason; and was informed that he had purposely swallowed a solution of corrosive sublimate. On my way to the house, I learned that he had taken about an ounce of solution, containing thirty grains to the ounce, and that about half an hour had elapsed since it was swallowed. Was told that he vomited in ten minutes after the poison was taken, and that an emetic was soon after administered by the apothecary who sold the solution, as also one egg. Another egg had been given him by his wife before I saw him. He had vo-

mited several times, in all about six ounces. The matters vomited appeared to consist of mucus and the egg swallowed, with some dark masses resembling sputa except in having a dull lead tinge.

I administered the whites of three more eggs, and whilst others were being procured, gave some flour and water. Three more eggs were brought and given, vomiting having taken place since the previous remedies had been swallowed. Within half an hour he vomited several times, and I repeatedly gave quantities of flour and water.

I learned from his wife that his habits were intemperate, that he had eaten little for two or three days, and nothing on that morning.

The symptoms under which the patient suffered resembled those of cholera, except that the vomited matters contained blood. There was a quick pulse, with a burning sensation in the abdomen: there was great thirst, no salivation, great foetor of the breath, and the quantity of urine passed was small. The patient died in fifty-two hours; and on a post-mortem examination, twenty-four hours after death, the following appearances were found:—

Brain healthy in aspect and consistence. The falx cerebri was wanting for the distance of about an inch at its anterior extremity, and the two hemispheres were united at this point. Considerable fluid was effused beneath the arachnoid, but there was no effusion into the ventricles. Heart and lungs healthy; the latter remarkably so. Liver pale, rather friable. Spleen shrunken, as in case of death from cholera. The stomach was contracted, for the extent of about two inches, at its middle portion, having the form of a dumb-bell. The contracted portion was about two fingers in width. It contained a small quantity of bright yellow fluid, having the consistence of thin gruel. Its larger and smaller curvatures presented patches of dotted injection, of a bright crimson tint. The dots could be seen, on close inspection, to be made up of vessels. No ulceration, and no ecchymosis. Mucous membrane a little softened in the neighbourhood of the most vivid red patches. Patches of beautiful arborescent vascularity were observed at intervals along the whole course of the small intestine, but its mucous membrane retained its normal consistence. Large intestine healthy. No ulceration in any portion of the intestinal canal. Lower portion of oesophagus not injected, nor its lining membrane softened. Bladder contracted, containing about a drachm of turbid urine, which Dr. Dalton found, on examination with the microscope, was rendered cloudy by the presence of a large quantity of epithelium scales, and similar to the urine found in the bladder after death from cholera.—*Amer. Jour. Med. Sci.*

OBITUARY.

On the 9th ult., at Damascus, of typhus fever, W. A. Bromfield, M.D., of Ryde, Isle of Wight.

On the 2d inst., at Brighton, F. C. Ronalds, Esq., surgeon, second son of the late Henry Ronalds, M.D., of Brentford, Middlesex.

BOOKS & PERIODICALS RECEIVED
FOR REVIEW.

Mémoire sur la Nicotine et sur la Conicine.
Par M. Orfila.

A Naturalist's Sojourn in Jamaica. By
P. H. Gosse, A.L.S.; assisted by Richard
Hill, Esq.

Lectures on the Principles and Practice of
Surgery. By Bransby B. Cooper, F.R.S.

On Nervous Affections connected with
Dyspepsia. By William Boyes, M.D.

A Manual of Physiology, including Physio-
logical Anatomy. By W. B. Carpenter,
M.D. F.R.S. &c. 2d Edition.

On the Transmission from Parent to Off-
spring of some forms of Disease, &c.
By James Whitehead, M.D. F.R.C.S.

On Rupture of the Urinary Bladder. By
Stephen Smith, M.D.

Report of the Proceedings of the Patholo-
gical Society of London. Fifth Session,
1850-51.

On the Nature and Treatment of Softening
of the Brain. By Richard Rowland,
M.D.

On the Morbid Conditions of the Bile and
Gall-Bladder. By Edwards Crisp, M.D.

Suggestions for the Extension and Perfec-
tion of Vaccination, &c. By J. R. Bed-
ford, Civil Assistant Surgeon, Calcutta.
1851.

London Journal of Medicine. November.
Edinburgh Monthly Journal of Medical
Science. November 1851.

Pharmaceutical Journal. November 1851.
Annales d'Hygiène Publique et de Médecine
Légale. Octobre 1851.

Casper's Wochenschrift für die gesammte
Heilkunde. Nos. 34-38, 23d August
to 20th September, 1851.

Transactions of the Medical Society of the
State of Pennsylvania, &c. Vol. 1.

Philadelphia Medical Examiner. October.
The American Journal of the Medical
Sciences. October 1851.

The American Journal of Dental Science.
October 1851.

British American Medical and Physical
Journal. October 1851.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Nov. 1.

| BIRTHS. | DEATHS. |
|---------------|---------------|
| Males.... 759 | Males.... 436 |
| Females.. 721 | Females.. 425 |
| 1480 | 861 |

CAUSES OF DEATH.

| | |
|---|-----|
| ALL CAUSES | 861 |
| SPECIFIED CAUSES | 839 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 222 |
| Sporadic Piseases, viz.— | |
| 1. Dropsy, Cancer, &c. | 49 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 78 |
| 4. Heart and Bloodvessels..... | 33 |
| 5. Lungs and organs of Respiration | 105 |
| 6. Stomach, Liver, &c. | 54 |
| 7. Diseases of the Kidneys, &c. | 6 |
| 8. Childbirth, Diseases of Uterus, &c. | 14 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 3 |
| 10. Skin..... | 2 |
| 11. Premature Birth..... | 34 |
| 12. Old Age | 33 |
| 13. Sudden Deaths..... | 5 |
| 14. Violence, Privation, Cold, &c.... | 23 |

The following is a selection of the numbers of
Deaths from the most important special causes:

| | | | |
|--------------------|----|------------------|-----|
| Small-pox..... | 17 | Convulsions..... | 24 |
| Measles..... | 13 | Bronchitis | 47 |
| Scarlatina | 50 | Pneumonia | 39 |
| Hooping-cough | 19 | Phthisis | 111 |
| Diarrhoea..... | 34 | Lungs | 1 |
| Cholera..... | 1 | Teething | 8 |
| Typhus..... | 60 | Stomach | 7 |
| Dropsy | 22 | Liver..... | 10 |
| Hydrocephalus | 29 | Childbirth | 8 |
| Apoplexy | 18 | Uterus | 5 |
| Paralysis | 13 | | |

REMARKS.—The total number of deaths was
95 below the average mortality of the 44th week
of ten previous years.

METEOROLOGICAL SUMMARY.

| | |
|--|-------|
| Mean Height of the Barometer | 29.62 |
| Thermometer ^a | 46.3 |
| Self-registering do. ^b Max. 0.0 Min. 31. | |

^a From 12 observations daily. ^b Sun.

RAIN, in inches, .38. — Sum of the daily obser-
vations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of
the week was nearly 4° above the mean of the
month.

NOTICES TO CORRESPONDENTS.

Students should send his name and address to the
publishers, when an answer will be forwarded
to him,—or, by making a personal application,
he may obtain the information which he
desires.

Students (No. 2).—The rules, so far as we know,
are not to be found in any English publication.
We advise the writer to address a letter to
Professor Buff, of the University of Giessen.

Q.—A letter should be addressed “à M. le Doyen
de la Faculté de Médecine, Ecole de Médecine,
Paris.” We know of no other means by which
the information required can be obtained.

The communications of Dr. Battersby and Dr.
Russell will be inserted with as little delay as
possible.

We must apologise to some of our correspondents
for the unavoidable delay in the publication of
their papers; among others, to Dr. Hannover,
Dr. Hull, Dr. Brown, and Mr. Pretty. The
papers are in the hands of the printers.

The Examination Papers of the University of
London were too late for this number.

RECEIVED.—Mr. W. B. Richardson.

Lectures.

INTRODUCTORY LECTURE,

DELIVERED AT THE ROYAL ORTHOPÆDIC
HOSPITAL, BLOOMSBURY SQUARE,
OCT. 13, 1851.

BY MR. TAMPLIN,
Surgeon to the Hospital.

GENTLEMEN,—By the appointment of the committee of management of this hospital, the duty of delivering a course of lectures on the nature and treatment of the deformities of the human frame devolves upon me; and, however much I may be deficient in those qualifications which constitute a lecturer, I trust that I shall not be found wanting in an honest endeavour to lay before you a faithful record of our present knowledge and experience. In fulfilling this duty, it will be my endeavour to avoid as much as possible speculation and theory; for it must, I think, be evident that, in order to establish a mode of treatment which has for almost centuries been principally in the hands of empirics, and which is still regarded by some with great doubt, and has been, until lately, looked upon with a jealous eye by the leading members of our profession, those upon whom the duty falls of carrying out the treatment, must scrupulously avoid everything that has the slightest appearance of speculation; in order that truth may establish itself in this most useful charity,—one that is second in utility to none of the vast numbers that adorn this Christian land,—and that by securing the good opinion, and obtaining the confidence of the profession at large, this great sphere of usefulness may be diffused throughout the kingdom.

It is, gentlemen, a source of no small gratification to find that the principles I laid down in the first course of lectures* which I had the honour of delivering are confirmed by experience; and, although I trust I shall be able to show that we have made some progress in detail, yet I shall have but little to advance which can be considered new in principle. Hence the foundation of the treatment of deformities may be considered sound and established; and I have no hesitation in asserting my belief that the science of surgery has received through the establishment of this hospital one of the most extensive practical additions,—one that confers the most im-

portant benefit upon a large class of suffering humanity,—that has ever been witnessed in the history of our profession. Thus, whilst medicine may be justly proud of the great results from the discovery of the sounds of the chest by Laennec, surgery is not the less favoured by the discovery of the successful division of tendons for the removal of contraction and deformity by Delpech; filling up a large hiatus in the science, and tending, I believe, to diminish and remove an immense class of those ills to which all flesh is heir. The unfortunate objects themselves, until this hospital existed, were doomed to a miserable and helpless existence; for it is a fact not very honourable to our nature, that the cripple has been regarded with much less sympathy than sufferers from other causes,—oftentimes the object of scorn and derision, mentally, morally, and physically degraded. To-day, gentlemen, I purpose to lay before you a statistical report of more than 10,200 cases of the varied objects which fall within the province of this hospital, embracing a great variety, and affecting directly or indirectly the whole body. Thus, from the discovery of the safe and successful division of tendons for the removal of contractions of the feet, has arisen the scientific treatment of every deformity of the body,—attended with success greater than could have been anticipated by the most sanguine supporter of the hospital, and one from which, I doubt not, will spring, by the attention of the profession in general to the subject, still more important results than have at present been achieved.

Of the cases above enumerated, 9624 were out-patients, 593 in-patients. Of deformities of the feet alone there have been 1780 cases, classified as follows:—

Congenital talipes varus (contraction of the heel, with inversion of the foot) 688 cases, viz:—

| | |
|------------------------------------|-----|
| Affecting the right foot only, | 182 |
| " left " | 138 |
| " both feet . . | 363 |

the other 5 cases being of a compound nature: in 2 of them both knees being also contracted, in 1 the wrists and fingers, 1 accompanied with talipes calcaneus of the opposite extremity, and 1 with malformation of the toes. It may also be mentioned, that in 2 of the above cases there was spina bifida co-existing.

The ages of these cases range as follows:—336 under 12 months, some being operated upon, at the ages of 3, 4, and 5 weeks; the remainder consisting principally of patients between the ages of 5 and 20 years, and several from the latter age to 50 years.

* Lectures on Deformities. Longman and Co. 1845.

Non-congenital talipes varus 60 cases, viz.:—

| | |
|--------------------------------|----|
| Affecting the right foot only, | 25 |
| " left | 20 |
| " both feet | 15 |

In 4 of these there was paralysis co-existing, and in 3 others spasmodic condition of the arm; the average ages being between 2 and 20 years.

Congenital talipes varus of one foot, and talipes valgus of the other, in the same patient, 15 cases, viz.:—

| | |
|--|----|
| Talipes varus right, and talipes valgus left | 5 |
| Talipes varus left, and talipes valgus right | 10 |

In one of these there was also contraction of the extensors of both knees, and of the flexors of the hips. Ages—6 under 12 months, the rest varying up to 31 years.

Non-congenital talipes varus of one foot, and talipes valgus of the other, 5 cases; in each instance the right foot being affected with varus and the left with valgus, attended, in one case, with paralysis.

Congenital talipes valgus (flat foot), 41 cases, viz.:—

| | |
|--------------------------------|----|
| Affecting the right foot only, | 15 |
| " left | 10 |
| " both feet | 17 |

In 2 of these malformation of the toes also existed. Ages, 28 under 12 months, the remainder varying up to 32 years.

Non-congenital talipes valgus, 181 cases, viz.:—

| | |
|-------------------------------|----|
| Affecting the right foot only | 54 |
| " left | 50 |
| " both feet | 67 |

And 10 others, in 6 of which paralysis co-existed; in 1, talipes equinus of the opposite extremity; in 1, talipes calcaneus of the opposite; 1 was combined with general rachitis, and 1 with disease of the ankle-joint. Ages, from 10 to 16 years, and up to 54 years.

Congenital talipes calcaneus (permanently flexed condition of the foot), 19 cases, viz.:—

| | |
|-------------------------------|----|
| Affecting the right foot only | 3 |
| " left | 4 |
| " both feet | 12 |

Ages—chiefly infants under 12 months.

Non-congenital talipes calcaneus, and calcaneo-valgus, 110 cases, viz.:—

| | |
|-------------------------------|----|
| Affecting the right foot only | 35 |
| " left | 39 |
| " both feet | 22 |

And 14 others, as follows:—3 with equino-varus of the opposite extremity, 4 with talipes equinus of the opposite, 2 with talipes valgus of the opposite, and 5 with

paralysis. Ages—from 2½ to 12 years, and up to 24 years.

Talipes equinus (non-paralytic, and all non-congenital), 299 cases, viz.:—

| | |
|-------------------------------|-----|
| Affecting the right foot only | 103 |
| " left | 86 |
| " both feet | 46 |

And 62 others of a compound nature; in 40 of which spasmodic condition of the muscles of the leg co-existed; in 13 others, spasmodic condition of the muscles of the arms; the remainder being combined with equino varus of the opposite extremity, disease of the joint, and ankylosis of the hip. Ages—from 20 months up to 50 years.

Talipes equinus paralyticus (contracted heel), 103, viz.:—

| | |
|-------------------------------|----|
| Affecting the right foot only | 46 |
| " left | 22 |
| " both feet | 12 |

And 24 others, divided as follows:—14 affecting the right foot, with perfect paralysis of the extensors of the knee; 8 affecting the left foot, with paralysis of the left upper extremity; and 2 affecting both feet—in one of which there was also knock-knee, and in the other perfect paralysis of the extensors of both knees. Ages—as in the non-paralytic.

Talipes equino varus, 162, viz.:—

| | |
|-------------------------------|----|
| Affecting the right foot only | 60 |
| " left | 50 |
| " both feet | 8 |

The remaining 44 cases consisting of 7 affecting the left foot, combined with paralysis; 6 of the right foot with paralysis; 2 of the right foot, with calcaneo valgus of the left; 3 affecting both feet, with spasmodic condition of the muscles of the legs; 6 of the right foot, with spasmodic condition of the muscles of the foot, in one of which, the right arm, wrist, and fingers, were also spasmodically contracted; 2 left, spasmodic; 2 left, with talipes calcaneus of the opposite extremity; 2 right, with talipes equinus of the left; 1 left, with contraction of the hip; 2 right, with malformation of the right hand; 1 right, with contraction of both hands and slight wry-neck; the remainder combined with contractions of the upper extremities. Ages—from 3 to 53 years.

Talipes equino valgus, 80 cases, viz.:—

| | |
|-------------------------------|----|
| Affecting the right foot only | 15 |
| " left | 35 |
| " both feet | 8 |

And 22 cases of a compound nature, 2 of which only were congenital, and those of the right foot; 4 affecting the left foot, combined with paralysis; 5 of the right foot, with paralysis; 1 of the right foot, with spasmodic contraction of the right

arm; 1 right, with talipes equino varus of the left; 1 right with talipes calcaneus paralyticus of the left; 1 right, with paralysis of the left upper extremity; 1 left, with paralysis of the right upper extremity; 1 affecting both feet, with paralysis; 1 of the right, with spasmodic contraction of the right arm; 1 left, with contraction of the hand; 1 left, with genu valgum of the right leg; 2 right, with general loss of power. Ages—from 2 to 8 years chiefly, and up to 30 years.

Contractions of the hip, knees, and feet combined, 86 cases, viz. :—

| | |
|--|----|
| Affecting the right side only | 9 |
| " left " | 10 |
| " both sides (the muscles in the majority being spasmodically affected) | 67 |

In some instances there was spasmodic condition of all the muscles affecting speech and deglutition. Ages—from 3 to 8 years, and up to 67 years.

Contractions of the knee alone, 315; viz. :—

| | |
|---|----|
| Congenital cases, affecting both knees | 15 |
| (1 of which was combined with talipes valgus of both feet, 2 with talipes valgus of the right foot, 1 with talipes varus of the right, and talipes valgus of the left.) | |

Non-congenital, arising from general causes, and not from disease of the joint itself, and affecting both knees 32

(In 18 of these, paralysis of the extensors of the knee co-existed, and in the remainder, spasmodic condition of the muscles, affecting, in some instances, the upper extremities also.)

| | |
|--|-----|
| From disease in the neighbourhood of the joint, affecting the right knee only, about | 105 |
| From other causes do. do. | 35 |
| From rheumatism do. do. with perfect ankylosis | 1 |
| From disease, affecting the left only | 92 |
| From other causes, do. do. | 35 |

Ages—from 2 to 20 years, and up to 60 years.

Contractions of the fingers only, 64; viz. :—

| | |
|---|----|
| Affecting the right hand (one of them only, congenital) | 26 |
| Affecting the left hand only | 13 |
| Affecting both hands (9 of them congenital) | 25 |

Ages—from birth to 74 years, but principally between 35 and 60 years.

Contractions of the elbow, wrist, and fingers, 99 cases, viz. :—

| | |
|---|----|
| Right elbow | 26 |
| Right elbow contracted in extended position, congenital | 1 |
| Left elbow | 13 |
| Right elbow and wrist | 7 |
| Left elbow and wrist | 9 |
| Right wrist and fingers, congenital | 2 |
| Right wrist and fingers, non-congenital | 19 |
| Left wrist and fingers, congenital | 2 |
| Left wrist and fingers, non-congenital | 6 |
| Both wrist and fingers, congenital | 2 |
| Pronator radii teres of both arms, non-congenital | 1 |

Contractions from the cicatrices of burns 11

Ages—from 10 to 20 years, and up to 59 years.

Contraction of the toes alone, 41 cases. Ages—from 30 to 50 years, and some few congenital.

Dislocation and contraction of the hip, from disease, 219, viz. :—

| | |
|------------------------------|-----|
| Affecting the right hip only | 114 |
| " left " | 99 |
| " both hips | 6 |

Ages—from 2 to 20 years, and up to 50 years.

Diseased joints, 204 cases, viz. :—

| | |
|--|----|
| Both hip joints | 1 |
| Right hip | 55 |
| Left hip | 60 |
| Right knee | 19 |
| Left knee | 9 |
| Right ankle | 18 |
| Left ankle | 12 |
| Right foot | 3 |
| Left foot | 3 |
| Metatarsal bone of great toe | 4 |
| Right elbow | 7 |
| Left elbow | 7 |
| Wrist | 4 |
| Hydrops articuli of knee | 9 |

Ages—from 2 to 8 years, and up to 65 years.

Wry neck, 28 cases, viz. :—

| | |
|--------------------------|----|
| Congenital | 5 |
| Non-congenital | 23 |

Ages—from infancy to 20 years.

Lateral curvature of the spine, 647, viz. :—

| | |
|-----------------------------|-----|
| To the right side | 470 |
| To the left side | 99 |

and 78 of a compound nature; comprising 22 with general rachitis, 32 with posterior curvature, 9 with contraction of sternum, 7 with knock-knees, 3 with contraction of the hip-joint, 1 with wry neck, 1 with knock-knees and Pott's disease of the vertebræ,

1 with outward curvature of the tibia; and 2 stated to be congenital. Ages—from 15 to 20 years, and up to 65 years.

Posterior curvature, or stoop . . . 217
In only 3 of which was there general rachitis.
Ages—from 12 months to 53 years.

Angular curvature 527
Affecting chiefly the middle dorsal and lumbar vertebræ, but including every part of the vertebral column; 14 with paralysis of the lower extremities; 11 with lumbar abscess, and only 1 mentioned as being a case of true rachitis.

Of weak and injured spine, 19; injury to the hip-joint, 6; general debility, 41 cases; badly united fractures, 25; stiff knee-joint, 4; projection of the sternum, 22; stiff and injured, or what is commonly termed contracted shoulder, 20; congenital malformations, 21, without contractions; paralysis, there are 168 cases; of knock-knees, simply, 2,062; of knock-knees and curvature of the tibia and femur, 1,300; of outward inclination of the knees without curvature, 8; of curvature of the tibia and fibula, 2,152; of curvature of the tibia and femur, alone, without alteration in the position of the ankle or knee-joints, 133; other cases, which do not admit of classification, 63, including cases of rheumatic ankylosis of the vertebræ, congenital varicose condition of the veins of the lower extremities, abnormal development of the gastrocnemii muscles, enlargement of the thigh bones, displacement of the cuneiform bone, dislocation of the tibia inwards, exostosis of the humerus and femur, dislocation of the thigh bone in the sciatic notch, dislocation of both hips in the dorsum of the ileum from rheumatism, sudden falling of the head forwards, with a grating sensation at the articulation of the first cervical vertebræ, contractions of the lower jaw from burns of curved bones (tibia) and talipes varus congenital, cases of the neck and arms from burns, one remarkable case of congenital extension of the biceps flexor femoris to the os calcis, &c. &c.

This report is but a numerical classification, the details of which will more appropriately follow in the ensuing lectures, under their several heads. It is, however, sufficient to enable you to form some general estimate of the statistical features of that class of diseases which comes under the denomination of deformities, a class more extensive than any other which is regarded as a separate branch of surgery, embracing, as you have seen, every joint, every articulation, the muscular, the nervous, the osseous systems; involving the ligaments;

the synovial membranes, the skin, and the various functions of the body, and those distressing cases which result from rheumatism, fevers, and other diseases. Congenital deformity without malformation, which numerically is so great, I am still of opinion is occasioned by position in utero, as in every instance, no matter at what age,—and we have a patient in the house fifty years old,—the muscles retain their proper functions, and they are all of them remediable: a fact sufficient of itself to prove the necessity and importance of this subject. Of the non-congenital, the causes may be divided into two principal heads: the one in which the nerves supplying the extremity or extremities are the remote cause; the other, in which the diseases of the articulation, or the bone in the immediate neighbourhood of the articulation, are affected; of which what is called scrofulous ulceration is of so frequent occurrence.

There are besides a large proportion of the deformities of the body, especially of the lower extremities of the spinal column, which owe their origin to general or constitutional debility: such as talipes valgus, knock-knees, curvature of the bones of the lower extremities, lateral and posterior curvature of the spine. Again, congenital contraction or deficiency of the skin, and cicatrices from burns, are causes of distressing deformity, and which are full of interest, as I think that I may venture to state they are easily, certainly, and painlessly remediable by a plan of treatment which I have adopted with such satisfactory results; namely, absorption of all that portion of the cicatrix which interferes with motion by its own pressure.

A case recently occurred of a patient aged 34, who had suffered from contraction of the wrist-joint at right angles, from a burn, 22 years, in whom the contraction was removed and the wrist extended to the straight position without operation in three months: voluntary motion is gradually returning.

In another instance, of a girl aged 11, of severe contraction of the elbow-joint at right angles, from a cicatrix occasioned by a burn extending from the shoulder to the wrist-joint, and which had been in existence two years, once having been operated upon unsuccessfully, was restored to the full extended position in about four months, with absorption of all that portion of the cicatrix which interfered with motion. This patient was kept in the house for some months afterwards, doing the ordinary domestic duties, without a sign of relapse; and I have lately been informed by the medical gentleman who is in the habit of seeing her, that she is still

as well as when she left the hospital. Diseases of the joints will form an especial object of inquiry during the course, and the opinion that I advanced in the lectures above alluded to, is every day confirmed, namely, that amputation of a limb in young patients is *surgical* interference; I mean by that, the use of the knife is not only unnecessary, but unscientific. The paralytic cases, painful and unsatisfactory as they undoubtedly are, admit of great relief by the removal of the malposition of the joints, and the after application of efficient support. For instance, there are many cases where palsy of the extensors of both knees, of the flexors of both feet, the limbs atrophied throughout, and which, unfortunately, are too commonly pronounced to be utterly useless as it regards amelioration, the power of flexure and extension remaining in the hip-joints, where by division of the contracted tendons (generally the gastrocnemius and the biceps flexor femoris), and the gradual restoration of the joints to their normal position, these patients are enabled to walk with the assistance of sticks and support to the knees and ankle-joints; and in cases in which only one extremity is implicated, to walk with comparative freedom. It is a fact not unworthy of notice, that paralysis of the flexors and extensors of the hip-joint has not at present fallen under my observation. Spasmodic contractions affect principally the lower extremities: not unfrequently, however, all the voluntary muscles are concerned, including those of deglutition and speech. Here, again, permanent benefit may be obtained by the restoration of the natural motions of the joints, controlling those muscles afterwards by support which retain an undue preponderance of power; these being invariably the adductors of the hip; the flexors of the knee and the extensors of the feet. The use of the mineral tonics has also been followed with much marked relief.

Of the non-congenital cases, where the muscles are not paralysed or spasmodically affected, perfect restoration may be anticipated. In that large and interesting class, which comes under the title of "curvature of the spine," highly satisfactory results are obtained, the health of the patient materially improving under a plan of treatment which does not interfere with the ordinary duties of life, or that exercise of the body which is absolutely necessary for the healthy performance of the various functions. It is my firm conviction, that if due investigation were given, and attention paid to this important subject by the legitimate members of the profession, cases of permanent or irremediable lateral curvature would be rarely, if indeed ever,

witnessed, with the exception of that occasional affection, rachitic softening of the bones.

Of Pott's disease and angular curvature of the spine, one of the most serious of all the affections that we are called upon to treat, by a long-continued and steady perseverance the disease is found to subside and the patients recover, and with the assistance of support are enabled to resume the perpendicular position of the body without risk. One case, in which there was perfect paralysis of the lower extremities;—so perfect that there was not even a sign of motion, and which continued for a period of three years;—gradually recovered the use of the limbs, and he now possesses perfect voluntary power over all the muscles. Of course, no attempt is made to remove the curvature, inasmuch as the loss of the bodies of the vertebræ is not reproduced.

In contraction of the hip from disease, combined with dislocation of the joint, the most gratifying results are obtained, and principally by mechanical treatment alone; for although I have not thought it prudent to attempt a reduction of the dislocation as has been done on the Continent, yet by restoring the thigh to a straight position with the pelvis, and the application of a boot equally raised from the toe to the heel, a very useful limb is secured without the assistance of crutches or support.

The knee-joint—the frequent subject of disease, contraction, and displacement—is found to yield readily to treatment, and in all cases where the joint or the extremities of the bone immediately surrounding it have not been the seat of disease and the cause of contraction, the motion of the joint admits of restoration. Ankylosis is of very rare occurrence: so much so, that, with two exceptions, we have not seen it, and in both of these rheumatic inflammation of the joint was the cause. *Not in one* instance has ankylosis been seen, from what is called scrofulous disease. We have had many adult cases, in whom the contraction had existed from 10 to 26 and 30 years, with displacement of the bones, and in some complete dislocation backwards of the tibia, which have been restored to the straight position, and the patient enabled to walk without the assistance of crutches.

Of wry neck, the great portion admit of remedy by mechanical treatment alone, provided there is not paralysis of the sternomastoid muscle on the opposite side to the contraction, only one instance of which has fallen under my observation.

Contraction of the elbow-joint from disease of the bone is one of the most troublesome and the least satisfactory of all the cases that we are called upon to treat, from the compound nature of the joint: and

although there are but few cases that do not admit of being straightened, yet the difficulty of obtaining voluntary motion of the joint is such as to render it necessary that we should be exceedingly cautious in forming a diagnosis. The contractions of this joint without disease are easily remediable, and voluntary motion is found to be perfect, excepting only the spasmodic and paralytic cases.

Contraction of the fingers, with thickening of the palmar fascia from what has been supposed to be inflammation, and which has been by many eminent surgeons the frequent subject of operation, yields readily to treatment both with and without operation, not of the fascia, but of division of the tendons. In not one instance have I found it necessary to divide the fascia; and in the greater proportion of cases gradual and continued extension is found to be perfectly successful.

A lady, 72 years of age, lately applied to me for contraction of the ring finger of the right hand at right angles, which had been in existence for some years, and which by extension alone was restored to the straight position in about two months. In another case, a gentleman about 50 years of age, with the same contraction of 15 years' standing, also was perfectly restored without operation, and with the return of free voluntary motion. Congenital cases of contraction or deficiency of the skin of the hands or fingers also yield to medical treatment alone, when the muscles themselves are not contracted, which is a most rare circumstance. That large proportion of cases which come under the denomination of knock-knees is at all times easily remediable both with and without operation; they require, however, a long and continued use of support to enable the ligaments to contract upon themselves. Curvature of the bones also admits of successful treatment, so far as the tibia or fibula are concerned, in all young patients, by the long or short application of steady, continued pressure, depending upon the age of the patient, the length of time the curvature has been in existence, and the condition of the bones themselves.

Out of this large number of deformities of the knee and of the bones of the lower extremities, amounting to 5483 cases, there were only 53 of genuine rachitis. Of the malformation little can be said, as each case demands particular attention: we have found the general principles of treatment of other contractions sufficient to obtain all the relief that the case can admit of.

I have now, gentlemen, very superficially glanced at the general results of our experience,—results that far exceed our own expectations, even in the present imperfect state. For it cannot but be supposed that a

new plan of treatment requires the careful experience of many years,—perhaps of generations, before it approaches perfection. These results are amply sufficient to command the attention of every surgeon who values either his own reputation or the welfare of his patients; for I am bold enough to state, that by far the greater proportion of cases that I have enumerated to-day *might and ought* to be relieved immediately upon the attack, provided it is probable to remove that unfortunately false impression, which is still so common in the profession, "that the patient will grow out of it:" one that requires no further refutation after the table that I have presented for your notice to-night. It is only within the last few days, that the daughter of a medical man applied to me with the most severe and irremediable lateral curvature of the spine, which has for years occasioned constant suffering and ill health, and for whom nothing had been done, from the conviction and assurance of her father "that she would grow out of it." That large class of cases of deformity of the knees and bones of the lower extremity could by simple and painless means be remedied at the very commencement and origin of the deformity.

The operations, gentlemen, embrace every articulation, and require a sound knowledge of anatomy and surgery, combined with great delicacy; for although they appear very simple to observers, from their being performed subcutaneously and with little suffering, yet they are by no means easily carried out. The division of the tendon of the tibialis posticus, of the biceps flexor cubiti, of the rectus femoris, and of the sternó-cleido-mastoideus, are all of such a nature as to command great care and caution from every one who possesses any feeling for the welfare of his patient. In the language of that distinguished ornament to his profession, Mr. Lawrence, "the health, the limbs, the lives of our fellow creatures, are entrusted to our care, with a confidence in our knowledge, skill, and humanity. Our utmost exertions and most anxious toil after information will not do more than enable us to undertake this serious responsibility. What kind of feelings, what conscience, can the man possess, who can plunge an instrument into the human body without knowing what he may divide or injure? who can operate without that full anatomical knowledge that will enable him to meet any emergency? How could he bear his own reflections, if serious or permanent injury, or loss of life, should ensue as the consequences of his ignorance and rashness?" These admirable remarks apply, gentlemen, with as much force to the operations for the treatment of deformities, as to surgery in general; for there are cases on record

that have terminated fatally for want of that precaution which every man ought to exercise. The after-treatment, upon which the cure depends, will require your most careful, cautious, and steady perseverance; *arte non vi* is the motto that alone can successfully guide us in the treatment under consideration: this can never be acquired by mere lookers on, any more than the mere walking through the wards of a hospital, without practical application, will make a surgeon; for although there are many slight deformities that admit of being remedied with little difficulty, yet there are numerous others, especially adult cases, which require all the patience, talent, and perseverance that can be commanded. The great art of treating deformities is so to adapt your means that the patient is not subjected to suffering. This has been my guide and constant practice; for the most severe adult cases can be restored without any interference with the general health of the patient, as may be witnessed by all of you, if you will go round the wards of the hospital; in fact, unless this caution is observed, not only will the health suffer, but not unfrequently failure will result; for it is by a continued, and not an interrupted treatment, that severe cases admit of cure.

As responsible beings, to whom is confided a sacred trust, we cannot but feel grateful to that Almighty disposer of events, who in his great mercy has vouchsafed to his creatures in the 19th century such blessings as this charity dispenses, and which are now developing themselves throughout the whole of Europe. We have been honoured with the presence and approval of the leading members of our profession, as well as with members from all parts of Europe. It has been, and is, our most sincere desire, that fidelity should mark our conduct,—that we may be the humble supporters of the honour, the dignity, and the usefulness of our common profession. Time, gentlemen, will and does test all things, and nothing more truly than a professional reputation. To gain a fortune is one thing, to maintain and preserve a reputation is another; and so long as we follow the dictates of our own conscience, and avoid those indirect means which are often so fatally enticing, depend upon it we shall secure the highest of all rewards—a self-approving conscience, the respect, if not the gratitude, of our fellow men. This has been our great desire, aim, and end. You have heard to-night my statement of the general result of the treatment here practised: I now for myself, and on behalf of my colleagues, beg to invite you to visit the hospital, and judge for yourselves. We have nothing to disguise; all is open, and by right, according to the laws of

the hospital, to every legitimate practitioner in medicine and surgery; and I can only say, that it will afford us great pleasure to give you every information and to render you every assistance in our power.

[At the conclusion of the lecture, Mr. Tamplin, in exhibiting some of the instruments in use at the hospital for the treatment of the different deformities, paid a well-merited compliment to Mr. Fergusson, of Giltspur Street, for his skilful construction of an instrument for controlling the motions of pronation and supination of the forearm.]

Original Communications.

ON THE PHYSICAL DIAGNOSIS OF DISEASES OF THE ABDOMEN.

BY EDWARD BALLARD, M.D.

Late Physician to the St. Pancras Royal General Dispensary, &c.

[Continued from page 711.]

DISEASES OF THE DIGESTIVE CANAL.

Diaphragmatic hernia—Diseases of the stomach—displacement—dilatation—flatulent distension—contraction—hypertrophy—cancer—diseases of the mucous surface—concretions.

Diaphragmatic hernia.—Before passing to the consideration of the signs of the diseases of the digestive canal, I have a few words to say about the physical indications which appertain to the passage of portions of it through an opening in the diaphragm. The signs will be those of absence of the displaced organs from their normal situation, of their presence in the chest, and of displacement and compression of the organs proper to the thorax. All these signs will be the more evident and distinctive the greater the quantity of the digestive tubes which may have passed up. When it is only a small knuckle of intestine, it may be readily overlooked; and, considering the rarity of the occurrence, its non-recognition may well be forgiven the observer. If the hernia be to any great extent, and be examined prior to the occurrence of strangulation or meteorism, the absence of the displaced organ may be marked by a corresponding sinking in of the abdominal parietes; and if the stomach be displaced, its percussion note may be entirely absent from its normal seat, or very much limited in extent. The pre-

sence of the intestinal tube or stomach in greater or less quantity in the left side of the thorax will be indicated by the permanent dilatation of the latter to the eye and on measurement; while the respiratory movements of the lower ribs, and of the left side of the abdomen, will be arrested. Percussion will indicate the resonance of the digestive tube, either stomachal, colonic, or intestinal, over a space corresponding with its contact with the thoracic parietes. This is most extensive for the most part anteriorly, and may extend upwards to within one or two inches of the clavicles, and pass somewhat to the right of the sternum. The resonance may not be of precisely the same character anteriorly and posteriorly, or even on adjoining parts of the same aspect of the trunk, in consequence of different portions of the digestive tubes, which may chance to be behind the spot percussed. Over the same extent the respiratory murmur and voice sound, with the vocal tactile vibration, will be absent, and, in place of them, the various sounds described as belonging to the several portions of the digestive tube will be heard. In proportion to the bulk of the hernia, the left lung will be compressed upwards and backwards, and its percussion sound will consequently be duller than natural; partaking, however, towards their line of junction, more or less of the special character of the adjacent portion of the digestive tube. In like manner, not only will the respiratory murmur be limited to the upper and posterior regions of the chest, but it will acquire more or less of the bronchial character. The displacement of the heart to the right is of very constant occurrence, and will of course be indicated by the usual signs—alteration in the seat of impulse, in the position of the sounds, and of the percussion-dulness of the organ. When strangulation has occurred, the signs will be so far altered as to present in addition those of obstruction of the intestines, of fulness above the portion strangulated, and of emptiness below. Where dilatation of the side and increased resonance are perceived, the only disease with which diaphragmatic hernia could be mistaken from a similarity in their physical signs, is pneumothorax. This, however, presents a more uniform tympanitic resonance, while the auscultatory phenomena are very different.

DISEASES OF THE STOMACH.

Displacement of the stomach may not only occur through an opening in the diaphragm into the chest, and through openings in the abdominal wall into herniæ externally, where it may be recognised by its dulness on taking a full draught of liquid; but it may also assume a more or less abnormal position within the abdomen, as the result of pressure, or in consequence of traction and gravitation brought into operation by diseases in itself, or in adjoining and connected organs. In great abdominal distension, whether from intestinal enlargement, tumours, or peritoneal collections, it may, like the liver or spleen, be displaced upwards towards the chest; or it may be detruded laterally, occupying a position more to the right in enlargements of the spleen, or more to the left in those of the liver or gall-bladder. Wherever it may be, the displacement will be indicated by the absence of its physical signs from their customary seat, and their presence in the unnatural and new position of the organ. A common form of displacement from pressure or enlargement of the liver, is that in which the pylorus descends, and the long axis of the stomach becomes vertical. This may without difficulty be detected by percussion. The dislocation of the stomach to the lower regions of the abdomen is commonly the result of traction or gravitation, and is accompanied by dilatation, and an altered form of the organ.

Dilatation of the stomach varies very much in its degree: it may be moderate, or so extensive as to occupy almost the whole abdomen, overlying the intestines, or forcing them into the pelvis. It occurs as the result of other diseases, such as bulimia, cancer or hypertrophy of the pylorus, or coarctation of the first part of the duodenum. It ought, perhaps, therefore, to be considered along with the signs of these lesions, but that there is a convenience in regarding and treating of it as a separate disease. The degree and amount of enlargement will modify the signs derived from physical examination. When the organ is greatly enlarged, its weight, and that of the accumulated ingesta which it contains, carry it down to the lower region of the abdomen, sometimes even to the pubic symphysis. When the stomach is full, the dilatation

is indicated by visible and sometimes great enlargement of the abdomen, so much so as to have led to the suspicion of the existence of ascites. If the patient be erect at the time of examination, the gravitation of the ingesta may cause the greatest fulness to be observed at the lower part of the parietes, while the upper part may be comparatively flattened; but, if the examination be made as he lies upon his back, this difference of the upper and lower regions will disappear. The whole of the surface corresponding with the enlarged stomach will be deficient in elasticity, and sometimes the margin of the organ may be indistinctly traced by the hand. A sense of gurgling may be perceived on sudden pressure; and fluctuation, either obscure or distinct, may often be noticed in the depending part. Percussion will elicit resonance over all the superior part of the organ occupied by gas; but below the level of the liquid the stomach may contain, there will be dulness, while the humoric sound may be elicited at the line of level itself. The position of all these sounds, however, may be altered by altering the posture of the patient, and thus favouring in certain directions the gravitation of the contents of the stomach. The gurgling on pressure, from admixture of air and liquid, can be heard both on application of the ear, and at a distance from the patient, and also the sound of fluctuation elicited by percussion, both which signs are remarkable for the length of time they may persist. After vomiting, and when the stomach contains no food, the enlargement of the abdomen may either lessen, or, if it continues, in consequence of gaseous distension, the hand will perceive elasticity over it. When full of gas, the enlarged organ can often be distinctly traced by the eye through the thinned parietes of the abdomen. The percussion-sound will be resonant, and characteristic of the stomach; the resonance extending downwards as low as the latter descends in the abdomen, and laterally sometimes into the flanks. If the patient be examined for the first time when the stomach is thus empty, there may be no satisfactory means of determining its lower level except by noticing the seat of dulness after a large draught of liquid, and listening to the spot to which it appears to fall.

Flatulent distension of the stomach

occurs without displacement, and differs from the last condition in the organ not being organically enlarged; but only distended by a more or less temporary accumulation of gas. When excessive, the upper part of the abdominal parietes will be evidently much fuller than the lower; the epigastric region, sometimes as low as the umbilicus, presenting a rounded, even prominent fulness; and the lower boundary of the organ can in some cases be traced out by the eye. There will be deficient depression below the margin of the ribs on the left side, with a fulness and prominence of the lower ribs and their cartilages, contrasting with the normal state upon the opposite side. The lower measurements of the left side of the chest will equal or even exceed those of the right, and the expansion of the left side of the chest and abdomen during the acts of inspiration will be less than natural. On pressing over the epigastric fulness, there may be diminished resistance, with a feeling of thinness of the parietes; or, on the other hand, there may be augmented tension and increased elastic force opposed to the pressure. Percussion will elicit a drum-like, tympanitic note over the whole extent of the organ, which may encroach on the natural dulness of the liver and spleen, and may rise as high as the 5th rib. On auscultation, the stomachal sounds will present more or less of the metallic tinkling character, which may also attach itself to the sounds of the heart as heard over the organ, or by the patient himself.

Contraction of the stomach, resulting from irritant poisoning, or from diseases which interfere with its due repletion, is recognised above all by the limited extent of its percussion-sound, and by this sign being constant at all times and under all conditions. The gastric bulge may be less marked than natural, and there may be unusual hollowness below the margin of the ribs, unaltered by the ingestion of food.

Hypertrophy of the walls of the stomach produces no visible fulness of the exterior of the abdomen; but, on application of the hand, there will be perceived a sense of tumour and resistance, more or less defined, at the epigastrium, extending towards the left, beneath the margin of the cartilages of the ribs. On percussion, the resonance will be stomachal, modified in sonorousness by the degree of thickness of the anterior

wall of the stomach, and by the extent to which the hypertrophy encroaches upon the cavity of the organ. The rigidity of its wall will also interfere with the increase of the size of the stomach after a meal. When the hypertrophy is confined to the pyloric extremity of the stomach, narrowing of the canal is commonly produced; and, as a consequence of this, the signs of dilatation of the whole organ arise. If the hypertrophy is unaccompanied by any adventitious growth, this, and perhaps some obscure sense of resistance somewhere in the epigastric or upper umbilical region, may be the only indications which physical examination can furnish.

Cancer of the stomach may affect either the walls of the body of the organ, or the cardiac or pyloric extremity. It may also be of various kinds, scirrhus and colloid being the most frequent. *Cancer of the cardiac extremity* results in more or less complete occlusion of the entrance of the organ; and the signs which indicate it will, so far as the abdomen is concerned, be the same as if the occlusion arose higher up in the course of the œsophagus. They will be, in short, those which arise from more or less complete emptiness of the entire digestive tube, and consequent more or less chronic starvation. On inspection, the whole of the soft parietes of the abdomen will be found retracted, the natural convexity being replaced by concavity, bounded by the salient margin of the framework of the thorax and of the pelvic bones. There may be a trifle less retraction observed below the margin of the ribs on the right side, indicating the position of the liver lower than customary in the cavity; the bulges of the stomach and liver by the side of the thorax will be lessened, especially the former, and the epigastric angle rendered more acute. The pulsations of the aorta will be readily seen and felt as low as the umbilicus. On measurement, the lower girths of the thorax and abdomen will be proportionally lessened, but the relative proportions of the two sides will be preserved. There will be lessened elasticity to the hand over all the soft parietes; and, if either the liver or spleen extend below the margin of the ribs, they will be readily felt. Any tumour present will be too deeply seated to be discovered, even upon the most careful palpation. On percussion,

the resonance of all the hollow organs of the abdomen will be lessened, and may even be replaced by more or less complete dulness, and the auscultatory signs of the presence of the intestines or stomach will be either wanting or only feebly perceived. In well-marked cases there will also be signs of descent of the upper limit of the abdomen, the pulmonary resonance on percussion, both superficial and deep, extending on both sides to a lower level than natural; this is the very converse of that which is noticed where, from any cause, the contents of the abdomen are greatly increased. *Cancer of the parietes of the stomach* can only be detected by physical examination when the anterior wall is affected. It then sometimes produces, especially in the colloid variety, fulness of the epigastric region, in which the form of the stomach may sometimes be pretty clearly traced. There will be, in addition, an even resisting tumour, with defined lower border; sometimes, though rarely, with defined upper border also, which is resonant on percussion, varying, however, to the extent of absolute dulness in proportion as the organ has become contracted in its cavity, or the latter has become filled with fungous growths. The ingestion of food makes no difference in the extent of the stomach signs. *Cancer of the pylorus* is for the most part not indicated by any visible external sign; but when involving neighbouring tissues, as the pancreas and mesocolon, it is accompanied by visible elevation and prominence over the epigastric or upper umbilical regions, which may extend even to the pubic symphysis, and be accompanied by visible pulsation. Palpation commonly discovers superficial or deep-seated tumour; but, in the early stage of the disease, it requires a careful search to be made for it at different times in the day, and after recent and full evacuation of the bowels.* There may, however, be considerable tumour present, and yet it will escape the hand from being overlapped by the liver, or obscured by various conjoined tumours within the abdomen. Its usual seat is a little to the right of the median line, and from one to three inches below the margin of the ribs,

* A small distinct tumour has recently been noticed by Dr. Jackson, in a patient under his observation, to be produced by a *healthy* pylorus. *MED. GAZ.*, vol. xlviii. p. 784.

and, while it is small, this is a common place to find it; but as the disease advances, and the tumour increases in size and weight, it gravitates more or less towards the lower region of the abdomen, and may be felt in situations where it might be little expected to be found—such as the umbilical or right iliac regions, the right flank, or over the pubes. Its size varies from simple palpable thickening to that of an egg, or larger, and its surface may be either smooth or nodulated. Its consistence is mostly hard, but sometimes it presents a certain amount of elasticity. It is commonly moveable, being found to alter its position a little, according as the stomach is full or empty, descending towards the navel if the patient sits up or stands, and moving a little towards either hypochondrium when he turns upon the corresponding side. As in the case of any other tumour, however, there may be such adhesions to the parietes and surrounding organs as to render it completely immovable, and, where the parts behind are involved in the disease, the tumour may be firmly fixed to the spine. It sometimes pulsates, and, in a recorded case, this was most remarkable when the stomach was full. Percussion over the tumour elicits a modified dulness. Occasionally there has been heard over the tumour a murmur transmitted from the aorta behind it. Pyloric cancer sometimes affects the circumference of the canal rather than the inner surface; but when, as mostly occurs, it encroaches upon the latter, it produces narrowing of the valve, and, as a consequence, all the signs formerly enumerated of general dilatation of the stomach, sometimes with retraction of the lower abdominal region. Hence these come to be useful aids in the diagnosis of advanced cases of scirrhus pylorus. Colloid cancer, while extending further along the body of the organ from the pylorus than scirrhus, and thus giving rise to more extended tumour, leaves, for the most part, the pyloric valve free for the passage of alimentary matters, so that dilatation and its signs less frequently complicate this form of the disease. Even in scirrhus dilatation, it is not a necessary sequel of even considerable coarctation, being avoided in cases where vomiting is frequent, and the food is not delayed long in the stomach before it is expelled.

The diseases of the stomach which

have been noticed and connected with palpable tumours have been mistaken for diseases of the liver, spleen, and pancreas; but these errors can be almost constantly obviated by means of careful examination.

Diseases of the mucous surface of the stomach, whether resulting in anatomical changes, or merely giving rise to functional disturbance, offer but few physical signs which can aid in their diagnosis. *Inflammation and ulceration* may produce some fulness and resistance at the epigastrium; but when vomiting occurs to any great extent, or persists for any considerable time, the signs of emptiness of the digestive tube noticed under “cancer of the cardiac extremity of the stomach” may be more or less fully developed. When *hæmorrhage* has taken place to any great extent, the resonance of the organ may be suddenly replaced by dulness over its whole surface, which is especially distinctive in the course of a chronic affection when accompanied by the general symptoms of hæmorrhage. The signs of prolonged sojourn of alimentary matters in the stomach are noticeable in certain cases of *dyspepsia*, where the irritation has produced a spasmodic closure of the pyloric orifice. There is a form of a gastric disturbance known as the *dyspepsia of liquids*, and, in cases of this kind, alternate pressure on either side of the epigastrium will produce gurgling, and occasion a fluctuation-sound long after any liquid has been swallowed, even in the evening, when none has been taken since the morning. When the *stomach is irritable*, the sounds which arise from the admixture of food and gas may be unusually frequent and loud.

Concretions in the stomach.—A solid concretion in the stomach has been known to give rise to tumour. A case of this sort was lately recorded, in which a ball of hair occupied the cavity and took the form of the organ, producing a solid tumour, with defined margin, rounded and convex, and occupying the epigastrium, and partly also the hypochondriac regions. It was mistaken for the liver until it was observed that, on grasping it and pulling it downwards, a considerable hollow space could be produced between its upper edge and the ensiform cartilage.*

[To be continued.]

DR. RAMSBOTHAM'S REPORT OF CASES

THAT OCCURRED IN THE EASTERN DISTRICT OF THE

ROYAL MATERNITY CHARITY.

[Concluded from page 794.]

DURING the year 1850, there were delivered in the Eastern district of the Royal Maternity Charity, under the superintendence of Dr. F. H. Ramsbotham,

1865 women—of which cases

22 were twins—one in about every 84.8 cases; of these, in 7 cases both heads presented; in 11 the presentations were head and breech, or inferior extremities; in 3 both were breech, or inferior extremities; and in 1 case the first presented with the head, and the second transversely. In 5 of these cases the children were both boys; in 7 both girls; and in 10 one girl and 1 boy.

1000 children were males.

887 children were females.

1842 were presentations of some part of the head; of which 2 were face presentations—one in every 943.5 births.

37 were presentations of the breech or some part of the lower extremities—being one in every 51 births; of these, 17 were twins.

8 were transverse presentations—being one in about every 236 births; of these, 1 was a twin; 1 was premature, and its birth was preceded by violent accidental hæmorrhage; and 1 was an abdominal presentation. Of the 8 children—3 were born living, 5 still; in all, the operation of turning was performed, and one of the mothers died five days after delivery of “puerperal fever.”

In 1 the placenta was completely implanted over the os uteri. The child was turned and born living, the mother had a slow recovery.

5 were complicated with dangerous hæmorrhage before delivery—not the result of placental presentation; one in every 373 cases. One of these was a transverse, and another a breech presentation; both women were delivered artificially, the former by turning, the other by drawing down the legs; in the remaining 3 the head presented (one of them being premature), and the children

were born naturally, some time after the artificial rupture of the membranes. All these children were born dead, but the mothers all recovered.

In 9 cases the placenta was retained within the uterus, either by atony or irregular contraction of the uterine fibres, or by morbid adhesion between the uterine and placental surfaces, so as to require the introduction of the hand for the purpose of removal—one in every 207.2 cases. With all these there was more or less hæmorrhage, and 1 of them was a twin case. The mothers all recovered.

3 women were delivered by craniotomy—one in every 621.6 cases. They all had small pelvis. In one of these cases the funis had been ten hours prolapsed, and in another there was a face presentation. This was a ninth labour, and the woman had been delivered instrumentally three times before.

3 were delivered by the short forceps—one in every 621.6 cases. In 1 the hand and funis presented by the side of the head, in another the face presented, and the third woman had a small pelvis.

8 women died within the puerperal month, or from puerperal causes—one in about every 233 cases; but only 3 of them as the consequence of labour, or 1 in 621.6 cases.

1828 children were born living.

59 were born still—one in about every 32 births.

Of the Deaths,

4 were from confirmed phthisis; 1 on the third day, 1 on the sixth, 1 on the ninth, and 1 on the twelfth day after labour.

1 was from chronic pulmonary disease (hepatization) on the fifteenth day.

1 of diarrhœa on the tenth day.

1 of enteritis, with obstinate constipation, on the 15th day.

1 of “puerperal fever” on the fifth day. The shoulder had presented, and the child had been turned.

Of the still-born children,

17 were premature.

6 were putrid at full time, or nearly so.

8 were breech presentations; 3 premature; 1 under a small pelvis, where there was much difficulty in the passage of the head; 1 after profuse accidental hæmorrhage.

5 were transverse presentations; 1 of them premature, with accidental hæmorrhage.

3 were delivered by craniotomy.

3 were under accidental hæmorrhage.

3 were under lingering labour.

With 4 the funis prolapsed by the side of the head.

With 1 the funis prolapsed by the side of the breech.

With 1 the funis was tightly coiled round the neck.

2 were very large children, there being in both cases great difficulty with the shoulders.

1 was after the mother had suffered a severe fall.

1 was after the mother had put herself into a violent passion.

1 was born with an abscess in its neck.

2 were born before the arrival of the midwife.

1 was at full time, head presenting, not putrid, nor delivered by art.

ON

SMALL-POX AND VACCINATION IN THE MAURITIUS.

(Abstract of a Paper read, on Monday, Nov. 3, at the Epidemiological Society.)

BY W. H. GARDNER, M.R.C.S.]

WHILST in the service of Government at the Mauritius in 1840, the author had charge of 700 or 800 cases of small-pox, which gave him great opportunities of observing the most interesting points connected with the disease. The experience thus afforded convinced him that the disease assumed a much more virulent character, and consequently was more fatal, than in this country. Some of his patients were Mozambique Blacks, recently captured from a slave-ship. These individuals had never been vaccinated; and, from their being naturally a very delicate race of people, it rendered them more susceptible of disease, and less able to bear up against it, coupled with the intense heat of the climate; and the want of the protective influence of vaccination.

Another and the larger class of patients were those living on the Island—Creoles, Indians, Malagash Mozambiques; these mostly of dissolute habits,

being addicted to the vice of drinking largely of a strong spirit called arrack; consequently the very worst subjects for a disease like this. Although many of these had been vaccinated, yet deaths occurred in a large proportion—not so much from small-pox as from its consequences to vital organs previously in a state of disease, or predisposed to it by habits before alluded to. Madness, severe biliary derangement, severe retching, jaundice, dropsy, and dysentery, were among the common causes of death. This unhealthy state of the system naturally weakened the protective power of vaccination. Some of the Mozambiques who had never been vaccinated, and who had not previously suffered from the disease, had it in its most modified form, with not more than 80 to 100 pustules, and these not going through their stages regularly, maturation occurring early, and the whole disappearing sooner than in ordinary cases. What caused this modification the author was unable to say. It has by some been asserted that modified small-pox cannot occur except after vaccination, or a previous attack. A circumstance is mentioned showing most strikingly how powerful an agent fear is in predisposing to this disease. Whilst in quarantine with the Blacks taken from the slave-ship, twelve of the Police Brigade of the Island were sent to the author to take charge under him of the poor creatures. Although increase of pay was offered to those who would volunteer, only eight out of a large number could be found to do so. The other four were consequently sent against their inclination. Not one of the twelve had had small-pox; but all showed good marks of vaccination having been successfully performed. On the morning of the eleventh day after exposure to the infection, two of the four pressed men were poorly, and had the premonitory symptoms of small-pox; and, on the evening of the same day, the other two also sickened. This was followed, on the thirteenth day, by an eruption appearing on all four: they all had it mildly. The infection, no doubt, was imbibed immediately they joined the Blacks.

It appears they all feared the disease; whereas the eight who did not take it had no fear whatever: all they thought of was how rich the increase of pay would make them.

The author has almost invariably found the eleventh to be the day of the premonitory symptoms developing themselves. As regards vaccination, he believes that, in a tropical climate, its good effects are earlier lost. He often has occasion in this country to vaccinate children from India who have been previously vaccinated there; and, although good marks are often visible, yet he invariably succeeds in producing an effect again; and often the vesicle is so perfect that it might be taken to be a first vaccination. He mentions several cases of this kind. He advocates strongly the necessity of re-vaccination, more especially in persons from India. Vaccination during the period of incubation of small-pox, or even immediately upon the first attack of fever, our author has practised, and believes a favourable influence is effected by it. The assertion made by Dr. Gregory, that vaccination "does not protect after puberty," is contradicted, and instances are given in support of the author's views. He also opposes Dr. Gregory's ideas of modified small-pox "not occurring before puberty." Other interesting points connected with small-pox and vaccination are dwelt upon in this paper.

ON BANDAGING THE ABDOMEN AFTER DELIVERY:

ITS EFFECTS ON HÆMORRHAGE, AFTER-PAINS, AND IN PREVENTING SYNCOPE.

ALSO A FEW REMARKS ON THE UTERINE COMPRESS.

By J. R. PRETTY, M.R.C.S.E. L.S.A.

OBJECTIONS having been made to the use of the bandage after delivery, in the MED. GAZ., 12th September, the writer hopes to be able to show the advantages and disadvantages attending its use, and what may be expected from it.

It may be well first to describe the bandage and its application. It should be of a material capable of giving support, yet yielding a little to the movements of the abdomen. A piece of calico, or still better, flannel, about four feet long, and fifteen inches wide, not hemmed, answers the purpose. It should be passed underneath the patient as low as the trochanters, and then pinned

with blanket pins, commencing from below, as tight as possible as far as the umbilicus, beyond which it should become gradually slacker, so as not to interfere with thoracic respiration. However well a bandage be applied, it usually rucks up, and frequently in a few hours will rise above the umbilicus. To prevent this, a large square napkin, doubled triangularly, may be attached from the middle of its folded border to the lower border of the back of the bandage, and when the accoucheur has properly applied the bandage, the nurse can secure it by bringing the points of the napkin forward, and fastening them the same way as with an infant. The writer has generally found nurses ignorant of the proper method of applying the bandage, and quite as unfit to bandage a woman for the first few days after delivery as they are to bandage a fractured limb.

The use of it is to aid the abdominal parietes, by enabling them to give proper support to the uterus; thus "maintaining a certain degree of contraction of the uterus," and diminishing after-pains. Dr. Churchill writes, p. 174,—*"I do not know that we can consider the binder absolutely necessary. Dr. Davis states that he has not used one for fifteen or twenty years, except in cases of flooding; it is, however, very useful in maintaining a certain degree of contraction of the uterus, and giving support to the abdomen, and afterwards in promoting a return to the natural condition of the uterine parietes; for which reason I think it deserving of rather more attention than is usually paid to it, at least after the first day or two."* The cases that most require support are met with in women of a lax habit, who have borne several children, and whose abdomen is pendulous or flabby. If it be believed that the abdominal parietes should give support after delivery, it is difficult to imagine why the bandage should be objected to. By using it we are consistently carrying out the practice of giving support, by following down the contractions of the uterus during delivery. The bandage is correctly regarded as a great means of restoring the abdomen to its usual size; and, although not immediately needed in primiparous women, yet it does them good service in future pregnancies and deliveries by preserving the shape of the abdomen, enabling its walls to recover

their normal condition after repeated distension, and thus averting the inconvenience from the child lying too forward in a subsequent pregnancy; and a frequent source of prolongation of labour is obviated.

The only disadvantage attending its use that the writer is aware of, arises from its not being properly applied, by being fastened too tightly above the umbilicus, and consequently interfering with the respiratory movements of the thorax. When after-pains have continued some time from inefficient contraction of the uterus, and from efforts to expel clots, and which the bandage has failed to relieve in four or five hours, its removal, and fomentations and an enema, have been advised. The charges against it of "aggravating after-pains" generally, causing irregular contractions of the uterus, displacing the uterus, and causing obliquity, prolapsus, &c., the writer cannot admit. He believes that it frequently effects *too little*, and that when after-pains have not been prevented by it that the pressure has not been sufficient, as in cases not only with weak abdominal walls, but also with deficient vis nervosa, and a relaxed state of the uterus. In such cases the bandage may be found unequal to preserve contraction of the uterus, and dilatation and hæmorrhage may ensue. Its inability to produce contraction of the uterus, and to arrest hæmorrhage, is certain. Dr. Collins thus advises it to be used with a contracted uterus; and although the late Dr. Davis only used it in cases of flooding, it would in the hands of many accoucheurs be found in the way, from its interfering with the adoption of other treatment. The bandage is used more for prevention than cure, and when applied with a partially contracted uterus, if there be no external hæmorrhage, a certain amount of internal may occur, clots form, and pains succeed from the efforts to expel them. In cases of external hæmorrhage, consequently, means of applying a greater amount of pressure have been resorted to by the late Dr. Davis and others,—as by hooks, pads, basins, &c. One of these will be presently mentioned.

The silence of some writers about the bandage is no objection to its use. Possibly, cases now more frequently occur requiring it than formerly. Tight lacing, and sedentary habits greatly

enervate the system, affect the development and strength of the abdominal muscles, and are a fruitful source of post-partum hæmorrhage. Mr. Robertson's remark that uterine hæmorrhage is unfrequent among the poor, is not, as would at first appear, an argument against the utility of the bandage in ordinary midwifery practice, because it is not commonly used among this class; it only shows that women who work hard can ordinarily do without it. Were all women accustomed to the active exertion of the poor, and knew what labour is, the well-known law that muscular exertion is accompanied by muscular growth would be exemplified, tight lacing would be discontinued, and consequently the muscular parietes would be efficient; enervation would subside, and two main causes of hæmorrhage would cease. The fact that after-pains are not usually met with in primiparous women, and also that hæmorrhage after delivery is less frequent in these cases, certainly is in favour of the use of the bandage. After-pains of a neuralgic or nervous character we cannot expect to be relieved by it. Those proceeding from the attempts to expel clots we cannot depend upon being prevented or removed by it, but in those from flatus it is of great service in preventing and relieving. The value of the bandage depends greatly upon its proper and immediate application after the birth of the child.

"The combined result of the nervous shock and muscular exertion" attending the birth of the child is followed by "collapse," and the pulse "descends as much below the ordinary standard as it was above it" (Churchill, p. 179).

This sudden depression, as the writer has before stated (MED. GAZ., 16th January, 1846), is also probably aided by the sudden removal of pressure off the large blood-vessels, depending in its extent on the rapidity of the birth, it quickly succeeding the discharge of the liq. amnii and the amount of that fluid. Some analogy appears to exist between this state and that produced by paracentesis abdominis. The sudden escape of fluid by tapping, without the abdomen being "equally compressed" from "the quick removal of pressure of the water off the large blood-vessels, may produce swooning, convulsions, and sudden death" (Cooper's Surg. Dict.)

Dewees also states that "the suddenly

emptying of the uterus by the evacuation of the waters, and the rapid delivery of the child, are the most common causes of the atonic state of the uterus." It is argued that when hæmorrhage occurs the analogy holds good; but, otherwise, that "the mass of blood previously circulating in the enlarged vessels and hypertrophied structure of the uterus is thrown back upon the aorta (?) *pari passu* with the diminution of the tumour by the contraction of the uterus." That the contraction of the uterus, causing its large venous sinuses to empty themselves into the veins of the abdomen enlarged by the removal of pressure, compensates in a degree, cannot be doubted; and that, in natural labour, and the patient being in the recumbent position, it is sufficient to prevent any dangerous depression. "The current of the venous blood is directed much more rapidly towards the great central trunks of the abdomen, because these vessels are now relieved from the pressure of the gravid uterus, and, by their expansion, the venous blood is drawn more strongly from the terminal branches towards the central canals" (Dr. Murphy's Lectures, MED. GAZ., Oct. 7, p. 829).

The amount of compensation must depend upon the amount of blood discharged with the throwing off of the placenta, the efficiency of the contraction of the uterus, and upon circumstances affecting it, and upon the support given by the abdominal parietes. The abdomen being "equally compressed" by the bandage must aid in diminishing the effects resulting from the removal of "the pressure of the gravid uterus." Although the writer has not seen syncope occurring immediately after delivery without hæmorrhage, yet he has witnessed so much sudden exhaustion with the woman in the recumbent position, as to render some exertion necessary to prevent its occurrence. He has found by experiment in a few cases, that the sudden removal of considerable pressure previously produced by his uterine compress, has produced such a sensation of faintness, although the woman was in the recumbent position, that he has been glad to tighten the compress by means of the tourniquet; he is consequently convinced, that position, although it will diminish, will not remove the effects arising from the sudden

withdrawal of pressure off the abdominal veins.

Having thus attempted to show "the necessity of bandaging the abdomen after delivery" (Dr. Murphy's Lectures), the writer has endeavoured to prove that the bandage is useful as an aid to nature, but that when more support is required than properly developed abdominal muscles could render, as in cases of deficient vis nervosa, and general relaxation and hæmorrhage, that a means of applying more powerful pressure becomes necessary. He will, therefore, now make a few remarks on the uterine compress, described in the MED. GAZ., 16th January, 1846.

"The object of this bandage is to maintain pressure on the uterus laterally as well as above the fundus, and to increase or diminish pressure by means of the tourniquet. Thus you may cautiously relax the pressure, or again increase it to any extent, without disturbing the abdominal bandage, which in this case need not be so tightly applied as when you have no additional means of increasing the compressing force" (Dr. Murphy's Lectures, MED. GAZ., vol. viii., p. 50).

The writer invariably uses the compress immediately after the birth of the child, and for the first few hours after delivery instead of the bandage, as it can be quickly applied, and it answers the same purpose. The pressure of it is equable, and when buckled tightly it gives quite as much support as the bandage; should not this be sufficient, by screwing the tourniquet you can tighten it, and increase the pressure. He uses it not only for the suppression, but also for the prevention of hæmorrhage; no ill effects have succeeded its use, the placenta is expelled more easily, and he believes that after-pains less frequently ensue. Many of his patients have found it so comfortable that they have been unwilling to have it removed. He believes that in an atonic state of the uterus hæmorrhage can be temporarily arrested by it without contraction of the uterus occurring, and that, as power returns, the pressure will stimulate the uterus to contract. In applying it, it is necessary to have the shoulders slightly higher than the hips, or the compress may slide upwards; very commonly the hips are elevated from the trunk being twisted, and the woman lying partly on her side and partly on

her back, and also by what is used to guard the bed being only beneath the lower half of the body.

Dr. Murphy writes, "The compression of the aorta proposed by Baudelocque, and highly recommended by M. Chailly as a means of arresting hæmorrhage, leads me to direct your attention particularly to this point of practice. We cannot well compress the aorta, without also compressing the cava and bifurcation of the iliac veins, which seems to me of equal, if not of greater importance, because the veins are a great source of flooding, and if we can prevent the régurgitation of blood from these great trunks into the uterine veins, an important means of prevention is accomplished." Also, writing about the bandage, the doctor states,—“The application of the bandage requires great attention; your object now (in a case of hæmorrhage) is much more than to give the uterus moderate support. It is necessary to compress it firmly; therefore, compresses are as essential, as the bandage alone is insufficient.”

As cases of hæmorrhage occur suddenly, and as the patient's life depends greatly upon the promptitude of treatment, it is of some importance for the accoucheur to have the means of using efficient pressure that can be quickly applied. Moreover, in country practice it is thought that the compress would be particularly useful, as it would enable the attendant to leave his patient sooner, and with less anxiety, as a nurse can easily tighten the compress by merely turning the screw. A patient last year told the writer, that a lady, a friend of hers, was confined a few miles from town after three or four hours' labour, that the medical man stayed half an hour after delivery, and then, congratulating the lady and her husband upon the good time that she had had, left the house. About two hours afterwards she felt faint; the doctor was sent for, and before he could arrive she was a corpse, death having been caused by internal hæmorrhage.

Dr. Robert Lee writes,—“For several hours after delivery in some cases, this alternate relaxation and contraction goes on, to the great hazard of the patient. By far the most important remedies, and those in which I place the chief reliance in such attacks, are *constant and powerful pressure over the uterus*, and the application of water to

the external parts, and the exhibition of stimulants, particularly wine and brandy. The abdomen should be strongly compressed with the binder, and folded napkins placed under it; and, in addition, the hands of an assistant should be placed over the fundus of the uterus.” “The best method of preventing retention of the placenta is to apply the binder immediately after the birth of the child.” The compress will save the assistant the great fatigue of using pressure “for several hours” with his hands, and will provide a more efficient “constant and powerful pressure.”

To sum up, the following discrepancies will be observed among five eminent authorities that have been quoted.

Drs. Murphy and Lee recommend the bandage to be applied immediately after the birth of the child, and additional pressure to be used in cases of hæmorrhage.

Dr. Churchill advises the bandage to be used after the first day or two, and pressure by the hand during flooding.

Dr. Davis applied the bandage only in cases of flooding, and also then employed additional pressure.

Dr. Collins advises the bandage to be used only with a contracted uterus.

Were the treatment of flooding more successful, more easy of application, and were fewer evils to ensue when life has been barely saved—saved, perhaps, frequently as much by nature's efforts as the accoucheur's—it would be unnecessary to seek for further aid; unfortunately, however, results prove the contrary.

Mr. Coxeter, Grafton Street, is the maker of the compress.

31, Bayham Terrace, 16th Oct., 1851.

TESTIMONIAL TO DR. LEVER.

A VERY pleasing tribute of respect and friendship, as well as acknowledgment of professional skill, has just been received by the family of J. C. W. Lever, Esq., M.D. (one of the Physicians of Guy's Hospital) from a number of ladies, being patients of his. It consists of a marble bust of the Doctor, executed in the first style of the art, by Baily, R.A. The presentation of the bust was made, on behalf of the subscribers, by their treasurer, Mr. Joshua W. Butterworth.

MEDICAL GAZETTE.

FRIDAY, NOVEMBER 14, 1851.

MANY of our readers are not in the habit of seeing a useful statistical document which is issued regularly every quarter, and the object of which is to convey to the nation at large a statistical knowledge of its condition and progress. Few medical men will care about the statistics of births and marriages, and still fewer will trouble themselves with comparing the long rows of figures of which the greater number of the pages of this document are composed. There are, however, two points of interest—namely, the *increase of population*, and the *state of the public health*—which are deserving of a passing notice, as showing the prevalence or absence of epidemic diseases, and the influence of sanitary legislation.

In reference to the *increase of population* during the summer quarter ending Sept. 30th, 1851, the Return furnishes us with the result that, while 150,584 children were born, 91,600 persons died; leaving an excess of 58,984 in the population. The excess of births over deaths in the first nine months of the present year was 170,411, which is probably more than equivalent to the actual increase of population.

The state of the *public health* is so tersely described in the Return, that we are able to give, in the subjoined extract, all that is likely to prove of interest to medical readers:—

“The health of different parts of the country differs widely, and the difference is greatest in summer. In the 10 summer quarters of 1841-50, the mortality in 506 districts, comprising, when the census was taken, 10,126,886 people, was at the rate of 18.15 in 1000 *annually*; while in 117 districts, comprising the chief towns, and 7,795,882

people, the mortality was at the rate of 25 in 1000 *annually*. Thus at least 7 in every 25 deaths which occur in towns are the result of artificial causes.* The mortality in the quarter ending September 1851 was at the rate of 23 and 17.93 in 1000 in the two groups of districts: it was a little below the average in the country, and considerably below the average in the towns. The *annual rate* of mortality per cent. in all England was, on the average of 10 summers, 2.099; in the summer quarter of 1851 it was 2.020.

“London has enjoyed a degree of health above the average in the last summer quarter: 13,064 deaths were registered, which is a smaller number than was registered in the summer quarters of 1847 and 1848, and half the number (27,172) registered in the summer quarter of 1849, when cholera was epidemic. During the three months of July, August, and September, more people have passed through or resided temporarily in London, with its 2,361,640 inhabitants, than ever passed through any city before in the same time. The past experience of large armies, or of the pilgrimages of the East and of the middle ages, might have justified the sinister forebodings which some entertained; but the railways, and the improvement in sanitary arrangements, have now rendered it possible to move masses of men about in thousands and millions without danger to the public health, as the event has here proved.

“The deaths by violence, though fewer than in previous summers, were 363: 10 by poison, 35 by burns and scalds, 43 by hanging or suffocation, 89 by drowning, 156 by fractures and contusions, 21 by wounds, and 9 by other violence.

| | 1847 | 1848 | 1849 | 1850 | 1851 |
|----------------|------|------|------|------|------|
| Suicides . . . | 65 | 59 | 48 | 58 | 48 |
| Murders . . . | 5 | 7 | 3 | 4 | 4 |
| Manslaughters | 4 | 2 | 2 | — | 4 |
| | 74 | 68 | 53 | 62 | 56 |
| Founddrowned | 35 | 42 | 38 | 35 | 31 |
| Total . . . | 109 | 110 | 91 | 97 | 87 |

* Can towns possibly exist on a large scale without the necessary occurrence of “artificial causes” leading to an increase of mortality?—ED. GAZ.

"The number of suicides and murders registered in London was fewer in 1851 than in the summer quarters of 1847, 1848, and 1850.

"The deaths by *Poison* in the summer quarters of 1848-50 were 15, 2, 26; and, instead of increasing, they were only 10 in the summer of 1851. This decrease is highly gratifying, as it follows so immediately the recent legislation on the subject. Fractures and contusions were more fatal than in 1849-50, but not more fatal than in 1848. That other form of poisoning, *intemperance* in the use of alcoholic drinks, seems also to be declining; 16 deaths were ascribed to intemperance, 55 to delirium tremens, in the summer quarter of 1850; while 13 and 35 were referred to the same causes in the summer quarter of 1851. No person has died of *hydrophobia* in any summer quarter since 1843. The deaths from that cause in the 6 years 1846-51 were 3; in the 6 years 1840-5 they amounted to 15; in the year 1839, to 4; in 1838, to 12. The decrease of this dreadful form of disease may be fairly ascribed to improved police regulations. 34 women died of *metria*; 55 of the other incidents of childbirth. 1683 persons died of *consumption*; next to this disease in fatality, and far above all other diseases, was *diarrhœa*, which destroyed 1456 lives in 3 months. Summer cholera was more fatal than it was in the summer quarters of 1847-8; and more than twice as fatal as it was in the summer of 1850. There has been a progressive increase of *diarrhœa* since the summer of 1841, when only 228 persons died of the disease; 627 deaths were referred to typhus, 38 to remittent fever. Typhus was increasing at the close of the quarter."

This return shows a very satisfactory condition of the public health. The Great Exhibition, with its *six millions* of visitors, did not lead to an outbreak of the sweating sickness, or any other formidable mediæval epidemic. It certainly speaks well for the sanitary regulations already in force, and for the small effect of "artificial causes" of mortality, that the influx of such a vast population into an already crowded metropolis did not in any degree affect

the fatality of disease, or the average number of deaths.

It would appear that the love of free trade and abhorrence of monopoly exercise so powerful an influence in the present day, that we may almost expect the arrival of that golden age when the influences of birth and wealth are to vanish before the advent of the genius of intelligence, which is henceforth to be our only load-star; a state of things judged hitherto to be Utopian, dreaded by some as the climax of all evil, and anticipated by others as the harbinger of all that is good. Be this as it may, we cannot but feel that the signal displayed by the sixty-nine young gentlemen, who, at Apothecaries' Hall, have passed an examination in classics and mathematics with so much credit, and which they underwent voluntarily, is pregnant with meaning and portent. It would appear that henceforth our general practitioners are not only, as heretofore, to absorb the lion's share of practice, but are to be gentlemen of first-rate education and refinement of mind. It may be said that this is a bold assertion, but we think, if the after-events equal this commencement, it will be a true prediction. It is impossible not to see that progress in this direction is the surest road to raise the apothecary to the highest position in his profession, and the best mode of arriving at that which he so much covets—namely, community of interest and position with physicians and surgeons. Classical and mathematical attainments are generally and deservedly allowed to constitute the finishing stroke of the education of a gentleman; and if our general practitioners become good scholars and men of science, we know not where their ambition need stop, or why they should not be suited to any position within the limits of the profession.

Indeed, except in the matter of the *guinea fee*, it is difficult to imagine what broad line of demarcation between the ranks of our profession will continue to exist, independently of intellectual attainment; for when the dignity and grace of mind conferred by the study of classical literature, are added to the accurate judgment of the mathematician—when the softening effects of poetry, and the comprehensiveness of views acquired by the study of ancient history, are added to proficiency in the modern sciences, and the experience of practical life—what is to prevent a man from becoming a fit companion for the highest grades of society, and a suitable referee in almost any emergency? For our general practitioners, then, we feel that a wide field is opening, and that their horizon is full of promise, and we wish them God speed.

But there is another view of the question not less full of interest and importance,—What are our physicians to do in order that they may maintain the first rank in the profession? If there be any value in a variety of ranks—if the profession generally would lose in dignity by possessing but one equality of level—physicians, or those who hope to obtain that rank, must be on the move. To physicians we would say,—everything portends that you must live by incessant exertion. You must be in the first class in intellectual attainments if you hope to remain in the first class at all. Your active professional brethren have already, in a great measure, supplanted you in practice; see that they do not tread on your heels in those qualities of mind which have hitherto been your chief boast. We should be sorry to see the distinguishing grades of our profession annihilated, for we believe that such an event would result in depriving it of that arena of honourable ambition which is already too confined; but

it would be useless to expect, and wrong to hope, that, for the sake of maintaining a privileged class, prestige should cease to follow in the steps of advancing intelligence; or that anything but intelligence should support position.

We would say to our graduates of Oxford and Cambridge, trust no longer to the M.D. as a defence against intrusion; your scarlet gowns will become soiled, and no longer regarded with pleasure and respect, if you do not carry them into a purer atmosphere than that which broods over the graves of departed ages. The venerable shades of monastic towers and classic groves will not defend you, if their still voices do not impel you into actions worthy of their associations; it will be your fault if the spirits with which they abound represent but the ghosts of an antiquated age, and if the busy genius of our modern metropolis supplies their place. For however delightful the associations of venerable antiquity may be, however soothing to the refined minds of those who by Providence are placed beyond the many ills which flesh is heir to in this ailing and busy working world, he who most vigorously exhibits the practical fruits of experience and living energy, will and ought to supplant all others. We hope and believe, however, that our ancient institutions will prove that they are as full of life as they are of dignity, and that their alumni may still occupy the first rank in the legion of honour.

We know not as yet by what fresh means they are to maintain their ascendancy, for this is a matter which requires much and anxious consideration, but we do know that diligence and mental vigour of a very superior order will be found absolutely necessary.

THE subjoined notice has been recently issued by the University of Cambridge:—

“The Vice-Chancellor has been requested to make it known that the authorities of the University of Sydney and of Sydney College, New South Wales, propose to appoint three Professors—viz., a Classical Professor, who is to be *ex officio* Principal of the College; a Mathematical Professor; and a Professor of Chemistry and Experimental Philosophy, with salaries respectively of £600, £500, and £300 a-year, and an additional allowance to each of £100 a-year until proper residences can be provided; the salaries of these Professors to commence from the day of their landing in the colony.

“Candidates for these several professorships are to send their letters of application and testimonials addressed to Sir J. F. W. Herschel, Bart., 32, Harley-street, Cavendish-square, London, on or before December 6, 1851, writing outside their packets ‘University College, Sydney.’

“Printed papers relating to the University of Sydney, and to the University College, Sydney, New South Wales, may be had on application to Mr. W. Ellwood, University Marshal.”

It will be perceived that to the Professorship of Chemistry and Experimental Philosophy, a permanent salary of three hundred pounds per annum is assigned. We advise those scientific gentlemen who are inclined to emigrate for the sake of this Professorship, to have it clearly understood, whether they are or are not expected to provide chemicals and apparatus for the above-mentioned sum. In the event of this liability been thrown upon them, the emoluments will of course be so reduced as to be scarcely worthy of acceptance. If the salary be fixed, exclusive of these necessary expenses, then a certain sum should be allowed for outfit; and it is our opinion that the salary should commence from the day of sailing from this

country, or a sufficient sum should be allowed for the expenses of the voyage.

With a full understanding on these points, we think that this Professorship presents an excellent opening to one who is devoted to science. A good knowledge of mining and metallurgy would be a most desirable addition to the qualifications of the candidate, as there is no doubt that the metallic wealth of New South Wales is as yet but imperfectly known to us, and when properly developed by scientific research, it must necessarily add to the prosperity of the colony, and the benefit of the mother country.

Reviews.

A History of Epidemic Pestilences from the Earliest Ages, 1495 Years before the Birth of our Saviour, to 1848; with Researches into their Nature, Causes, and Prophylaxis. By EDWARD BASCOMBE, M.D. 8vo. pp. 250. London: Churchill. 1851.

ON a matter of so pressing and immediate interest to every one of us, a well-digested history cannot fail to command attention. Dr. Bascombe's work presents an excellent summary of the principal circumstances and features of every important epidemic that has been recorded in the pages of history. We have herein a most erudite book—one that has been compiled at a great expenditure of time, and has required much patient research and varied learning for its execution. The real value, however, of a work of the nature of that before us must be estimated rather as affording the data for the deduction of practical conclusions on the prevention of pestilence. The author's inferences, we regret to say, furnish nothing particularly new on this point. With regard to the nature of the epidemics upon the historical record of which he has been engaged, we quote the following passage:—

“With reference to modern nomenclature, we now have pestilence called plague in Egypt; yellow fever in America and elsewhere; bilious, remittent, and intermittent, and also yellow fever, in the West

Indies; and typhus or nervous fever in Great Britain. We read also of the same epidemics which the ancients called pimples, pustules, apostemes, and gangrenous sores, now being called distinct and confluent small-pox, carbuncles, &c.: and I repeat that the perusal of ancient writings, both sacred and profane, not only affords us ample evidence of the origin, nature, causes, progress, and violence, of such maladies in the primitive ages of the world, but they also demonstrate the identity of ancient pestilence and modern plague,—the resemblance between boils and modern carbuncle,—the like appearance of pustules and small-pox,—all tending to prove that no material alteration in the nature of any diseases, or of their causes, has taken place since the first population of the world; and, above all, that they display the perpetual uniformity of Providence in the entire operations of Nature's works."

The author refers the origin of all epidemics to certain indefinite cosmical or meteorological disturbances.

"The chronicles of all nations are replete with notices respecting the remarkable commotions of Nature which have proved from time to time so inimical both to the animal and the vegetable kingdoms; and on carefully reviewing the facts detailed in the histories of epidemic pestilences or diseases, elemental disturbance, has enveloped, as it were, the entire globe, carrying death and misery into every quarter. I am, therefore, of opinion that the grand phenomena of Nature exhibited in the commotions of our physical world supply us with abundant materials for the explication of all epidemic pestilences or diseases; that the latter are consequently assignable to natural causes, without searching for or hunting after mysterious agencies, to the neglect of those which Nature is constantly presenting to our view."

Dr. Bascombe expresses a very strong and decided opinion against the contagiousness of pestilential diseases, as seen in the following quotations:—

"Epidemic diseases, which have appeared and spread at different seasons,—in fact, at all times of the year—in the middle of summer, for instance, as well as in the depth of winter—which have also been found traversing whole continents, continuing their course for many successive months, and often assuming a definite direction or progress,—often affecting largemasses of people living on the same spot, while others in adjoining localities are exempt,—cannot, I contend, be attributed to contagion, but to the qualities and influences of the sur-

rounding atmosphere, coupled with enervating habits, &c." (p. 210.)

Again, "*contagious diseases are recognizable by the determinate periods of their phenomena, especially as regards specification, as also by their mode of propagation; whilst, if epidemic pestilences were dependent on, or caused by contagion, they would never cease until whole communities became extinct!*" (p. 210.)

"But that which I would urge in support of the non-contagiousness of epidemic pestilences, irrespective of every other authority, is the remarkable fact, that in our most ancient medical treatise—the 13th chapter of Leviticus—no mention whatever is made of epidemic diseases being reckoned contagious, although at the time when the Levitical code was being propounded there was no lack of experience in epidemic diseases; for in the days of Moses the times in Egypt were calamitous indeed: pestilence and famine ran riot through the land. Had epidemic diseases, then so common and lethal in Egypt, been considered contagious, the presumption is, that they would have been enumerated as such among those which were specified as possessing that character—viz., leprosy, scabies, lues, &c.: and when we observe such minuteness displayed in the Mosaic ordinances, to the very freeing of houses from damp previously to occupation, we cannot suppose that precautionary directions as regards such universal and lethal maladies as epidemics would have been omitted. With this remarkable fact before us, derived from sacred authority, I feel at a loss to conjecture the grounds on which the idea of contagion is at all entertained, more especially as we have the occurrence of pestilential diseases not only foretold, but their very nature and mode of production positively conveyed to us from the same divine source" (p. 213).

The author thus sums up his argument:—

"All epidemic pestilences or diseases are to be accounted for on the principle of natural causes,—viz., that atmospheric disturbances, consisting of variations of temperature, hygrometric influence, atmospheric pressure, electrical tension, &c., are the exciting causes; while, on the other hand, want of light, impure air,—especially from defective ventilation, in which are included malaria and all other noxious vapours, from whatever source arising,—scanty diet, and habits induced by the irregular, artificial life of many, are the predisposing causes, which, by enervating and otherwise spoiling the system, render it more susceptible of external atmospheric impressions in the production of epidemic pestilence or disease" (p. 214).

In the face of all the reasoning of Dr. Bascombe, we would urge the line of argument so successfully adopted by Dr. Bryson in a pamphlet lately reviewed by us (p. 507), and in which he points out this important fact with regard to the communication of cholera—viz., that it occurs first in *sea-port* towns, where ships have arrived from other countries where that disease has prevailed at the time of their departure; and that subsequently the disease has spread inwardly, generally corresponding with lines of human traffic.

We object to the style of the following passage, which directly contradicts sacred history, wherein the occurrences referred to are stated to have been inflicted immediately by the hand of the Almighty.

“It is recorded that in the month Adar,—answering, according to our computation of time, to the period between the middle of February and March, the end of the Jewish year,—during the reign of Pharaoh IV., king of Egypt, in the 80th year of the life of Moses, the sacred historian and great captain of the hosts of Israel, many awful prodigies in the natural world commenced, especially in commotions of the elements, which were succeeded by a pestilence destructive both to men and beasts in the low lands of Egypt. This terrible pestilence was preceded by commotions of the elements,—hail, thunder and lightning, heat and drought, the generation of insects, &c.; for the summer had been hot, and attended with heavy, cold, nocturnal dews, alternating with rains, after a humid winter. The weather had been very variable: the excessive heats and hot winds exhausted the inhabitants by day, and the cold, damp dews, chilled them by night. The atmosphere was so filled with fiery elements, and clouds of dust and sand, that men and cattle were in imminent danger of suffocation, and were compelled to seek shelter from these dry storms and tempests,” &c. &c. (p. 1).

On the whole, we look upon this work as a useful contribution to medical literature.

Homœopathy: Report of the Speeches on Irregular Practice, delivered at the Nineteenth Anniversary Meeting of the Provincial Medical and Surgical Association, held at Brighton, Aug. 13th and 14th, 1851. Pamphlet, 8vo. pp. 42. London: Churchill. 1851.

THE sentiments expressed by the various speakers at the Brighton Meeting

will be re-echoed throughout the entire ranks of the true members of the medical profession. We feel that it is unnecessary to reproduce in our pages the short, simple, and incontrovertible refutations of the practices and alleged “principles” of homœopathy which were delivered on this occasion; they are familiar, and will readily suggest themselves, to the minds of our readers.

We cordially thank the Association for having so boldly made an effort to renounce those apostates or aliens who have, under false colours, obtained a name and a place among us. It is time that the profession should speak out plainly, and declare to the world that, although with us, these are not of us. The corporate bodies should before now have shown their knowledge of the true interests of the profession and of the public, by unhesitatingly declaring, as this Association has done, “that it is derogatory to the honour of members of the profession to hold any kind of professional intercourse with homœopathic practitioners.”

We wish that our Colleges had not left it to their members to initiate the repudiation and separation of all who practice this delusion in any degree, or who hold intercourse with its practitioners.

Dr. Cormack pointed out some of these renegades, and did eloquently expose the entire system of imposture, its practitioners, and their various allies. Most painful, indeed, is it to see among these men of education, or, at least, men who are supposed to possess the highest degree of mental culture—clergymen;* but who, we cannot but consider, do hereby show a great neglect of those educational opportunities which were, or should have been, afforded to them at College. For the fashionable devotees of any or every kind of quackery—idle lords and ladies—we express neither surprise nor regret: their too abundant means of the gratification of every desire remove the incentives to diligent study, and leave them, as a class, the *great-half-educated*, and the ready prey of every changing system of imposture, medical, moral, or religious.

* We forbear to quote the rhapsody of ignorance and presumption, not to say blasphemy, which is cited by Dr. Cormack from the sermon of a reverend advocate of Hahnemannism. We refer our readers to the pages of this pamphlet for so humiliating an exhibition.

Dr. C. J. B. Williams most forcibly dwelt upon the manner in which the eternal interests of the sick are endangered by this perilous gambling with life and death, whereby its victims are hurried out of this life; whereas, by scientific treatment, their time for repentance might have been prolonged.

We were almost inclined to concur with Dr. E. Crisp, in his indignant contempt of homœopathy, when he said:—

“I think, sir, it is beneath the dignity of this Association to enter upon the question, for it puts reason at defiance; and one might as well try to bottle a shadow, or pocket a sunbeam, as to find the virtues of these infinitesimal doses.”

As, however, the profession has a duty to perform towards the public, it would be a great dereliction thereof if it did not faithfully and earnestly warn that public of the dangers that beset this fanciful system of nothingness. We do so in all other sanitary matters, and we must not now neglect our duty because it has to deal with something more contemptible than the other nuisances that we would clear away from our streets and houses.

It may safely be affirmed, without drawing an invidious comparison, or in the least detracting from the merits of other speeches, that that which strikes us as on this occasion going most completely to the root and source of this heresy was delivered by Dr. Cowan, of Reading, from whose remarks we shall quote one or two passages:—

“The increase of homœopathy I look upon with a very grave view: I regard it as one of those portentous moral phenomena which are stealing over the age. It is not the *practice of medicine* only that is at stake: it is the *practice of sound thinking*. The man who believes in homœopathy is a mystic—his creed is at variance with all rational experience, and subversive of all previously acquired knowledge. He has lost the ballast of his reasoning faculties, and set at defiance all those means by which the human mind is regulated. I distrust his judgment upon every subject. Belief in homœopathy is but the symptom of a mind without stay or ballast, liable to be driven hopelessly into every folly, ever ready to spurn to-day what it yesterday believed.”

The truth of this position will be daily evinced by contact with those who

believe, or think they believe, in homœopathy. The following remarks relative to intercourse with these pitiable and deluded persons are decisive:—

“To eject homœopathic practitioners from our ranks, and exclude them from professional fellowship, is no act of tyrannous intolerance or bigotry, but a necessary measure of self-respect and self-defence—a consistent testimony to the principles we profess—the only method of extricating truth from apparent alliance with what we unhesitatingly assert to be a folly in philosophy and a dangerous delusion in practice.”

“In discussing homœopathy, I do not attempt its refutation by merely pointing out its arithmetical absurdities and physical impossibilities, but I banish it at once beyond the pale of discussion, and class it amongst the fallacies too extreme for investigation. If a man say to me, ‘Two and two make *five*,’ I do not speak to him twice: the man is *gone*. And if a man profess to me his belief in homœopathy, I am apart from him for ever. He admits as facts things at variance with rational experience, and in these circumstances I must stand aloof from him.”

Dr. Cowan thus well expresses that state of the public mind which favours the spread of this preposterous quackery:—

“We have read of *mental epidemics* in the middle ages, but we are apt to forget how extensively they prevail in our own. In the midst of such restless excitement,—such morbid extravagance,—to adhere to the ‘old paths,’ and to sobriety of judgment, is no easy task. To be for ever seeking *first principles*, and to be without a standard *within* by which new pretensions can be tested, is the condition of multitudes of all classes among whom we live: it is one of the most dangerous characters of an age of over-heated intellectualism. We rush wildly forth upon the field of experiment—mistake our fancies for facts—our expectations for principles; and are soon hopelessly enrolled in the rapidly-swelling ranks of the deluded and deluding.”

The move thus energetically made in the right direction by the Provincial Medical and Surgical Association will, we trust, be followed by similar movements on the part of the public examining bodies, who should lose no time in expunging from the lists of the names of their members those of any persons practising or countenancing homœo-

pathy or any other gross and open quackery. We perceive, by an Appendix which contains a correspondence between Dr. Day, of St. Andrew's, and a Mr. Hale, that no homœopathic person can obtain the degree of that University without prevarication and falsehood. Nevertheless, we know that the degree has been conferred in more than one instance: hence the dread of prevarication and falsehood affords no protection.

Proceedings of Societies.

MEDICAL SOCIETY OF LONDON.

DR. MURPHY IN THE CHAIR.

Nov. 8, 1851.

Use of Tannate of Alumina.

MR. ROGERS HARRISON placed before the Society a specimen of *Tannate of Alumina*, and recommended its employment in the treatment of purulent and muco-purulent discharges from the urethra, especially when the former were not of an acutely inflammatory character.

Mr. Harrison had found the local exhibition of the remedy in question followed by the most satisfactory results. The method of using was to throw into the passage an injection containing from 2 to 10 grains of the salt dissolved in distilled water, the strength of the solution being in a great measure determined by the amount of smarting pain produced. The most advisable method was just to keep the strength of the injection up to the smarting point. He thought it injurious to produce more than a gentle scalding.

Mr. Harrison did not anticipate, of course, equal success in every case, but he generally found the disordered condition of the urethral mucous membrane removed in the course of one or two weeks, in the ordinary run of cases.

On his recommendation, some of his professional friends had employed it in their practice, and from their reports he was supported in his high opinion of the remedial properties of the tannate of alumina. The combination of alumina and tannic acid produced by Mr. Rogers Harrison, was of a dirty yellowish colour, and in crystals about the size of those of coarse sugar, and readily soluble in hot water.

New Method of Treating Diseased Joints.

A paper on this subject was read by Mr. GAY, of which an abstract will be published in our next number.

SURGICAL SOCIETY OF PARIS.

Oct. 22, 1851.

Hæmorrhage after Gun-shot Wounds.

M. SISTACH stated that, from observations upon numerous cases, he had come to the conclusion that the hæmorrhage after gun-shot wounds is more frequently primary than secondary. This was contrary to the generally-received opinion, but it was based upon three hundred and fifty instances seen by him at Djidjeli in 1851, out of which number only two examples of secondary hæmorrhage occurred.

Hæmaturia.

M. GIRALDES read a report upon three cases, addressed to the Society by Mr. Birkett, of London. After having analysed the cases, the reporter stated that they showed that in many cases the kidneys, although placed deep in the lumbar region, may be injured by contusion of the loins, while the integuments of the part may exhibit no trace of the violence; and that under these circumstances the kidneys may be bruised, in a similar manner to the lung, heart, liver, intestines, or bladder, by pressure or severe shock; and, lastly, that the hæmaturia following upon contusion of the lumbar region can only proceed from injury to the kidneys.

The Employment of Chloroform.

M. SÉDILLOT had been struck with the imperfect manner in which most surgeons employ chloroform. Many of their patients, he observed, still felt pain, but lost the recollection thereof: this was evident to him from the cries uttered when the incision was made. In his opinion, the use of the chloroform was to produce complete unconsciousness. The accidents that have occurred with chloroform have been owing to the incomplete employment thereof. The proper dose, and the warning of danger, might be ascertained by the state of the respiration: according to M. Sédillot, whilst this remains regular, no danger need be apprehended. The author pointed out the importance of ascertaining the purity of the chloroform employed.

M. MAISONNEUVE protested, on behalf of many of his colleagues, against the inference that they had only imperfectly employed this anæsthetic: at the same time he concurred in M. Sédillot's opinion, that it is necessary to obtain its full influence.

M. GUERSANT always endeavoured to obtain the full effect: in young subjects excitement was less than in adults.

M. FORGET considered the conclusions of M. Sédillot as too absolute, and related instances in illustration.

ACADEMY OF SCIENCES, PARIS.

Oct. 27, 1851.

The Vital Point of the Medulla Oblongata.

M. FLOURENS, with reference to a communication by M. A. Regnoso, on the presence of sugar in the urine, took occasion to point out with additional precision that part of the medulla oblongata which he denominates the *vital point*, the prime mover of the mechanism of respiration. In 1827, M. Flourens had stated that this part did not exceed three lines in extent: he now added proofs that it does not extend to so much as an entire line. The limits had been traced by him in the brains of dogs and rabbits: the superior limits were at the foramen; the inferior at the point of junction of the posterior pyramids.

Functions of the Sympathetic Nerve.

MM. WALLET and BUDGE transmitted further observations upon the intracranial portion of the sympathetic, and upon the influence exerted over the motions of the iris by the third, fourth, fifth, and sixth pairs of nerves.

Immobility of the pupil, with a slight degree of dilatation, are the only effects of section of the optic nerve; after which, section of the third, fourth, and sixth pairs of nerves, exerts no influence upon the pupil. If the sympathetic in the neck be divided, the eye is cut off from connection with the brain, except by the fifth pair. Division of the fifth causes contraction of the pupil, taking place gradually and slowly. The same effect in a less degree follows on irritation of this nerve. Galvanic irritation of the posterior portion of the trunk of the fifth nerve produces constriction of the pupil. The fourth and sixth nerves exert no influence upon the pupil. Division of the fifth nerve anteriorly to the Gasserian ganglion destroys the influence of the sympathetic nerve upon the pupil, and shows that the fibres of this nerve pass through the ganglion.

The Physiology of Albumen.

M. MIALHE read an essay, in his own name and that of his colleague M. Pressat, on the physiological condition of albumen in the economy.

The authors observe that no substance can enter or pass out of the animal system except it be in a state of solution. Albumen has seemed an exception to this law; it is insoluble in its normal state, and therefore must undergo transformation to render it soluble before it can enter the economy.

In experiments on endosmosis it has

been an error to suppose that albumen traverses the membrane without having undergone a change. Albumen has a globular structure: it exists in the system in three different states: 1. *Normal*,—constituting a principal element of fluid blood, insoluble, incapable of traversing the vessels, precipitated by heat and nitric acid; 2. *Amorphous, caseiform*,—the first modification by the influence of the gastric juices, soluble, but not capable of assimilation; 3. *Albuminose*,—the ultimate transformation by the act of digestion, soluble, assimilable, endosmotic, contained in all the fluids of the body, forming the principal element of nutrition, not precipitable by heat or nitric acid. In all these three conditions albumen is chemically isomeric.

ACADEMY OF MEDICINE, PARIS.

Oct. 23, 1851.

Tannate of Quinine in Intermittent Fever.

M. LEFEVRE, of Rochfort, communicated statistics which went to show that the tannate does not possess powers superior to the sulphate of quinine in arresting ague. It is, however, more certainly retained by the stomach, and less frequently produces derangements of the nervous system.

Researches upon the Antisymphilitic Treatment of Pregnant Women.

M. DEVILLIERS read an essay in which he submitted the following conclusions:—

The treatment is well borne during the first half of the period of pregnancy. When injurious at this period, it appears to be owing to the state of the digestive organs and nervous irritability of the woman. The foetus becomes more susceptible to the influence of syphilis and its treatment as it approaches the period of extra-uterine life. In treatment it must be borne in mind that conception may rouse into activity dormant symptoms of syphilis, and that these will disappear after parturition. Primary syphilis occurring in the early months of pregnancy must be actively treated. In the later periods caution is required, as abortion is readily produced. The treatment must be discontinued as soon as possible.

The treatment is better borne, both by mother and foetus, at all periods according with the severity of the symptoms. If syphilis occur in the later period, treatment must be adopted, as the infant will be the more disposed for treatment after birth. Treatment should be resumed at least within eight days after parturition.

Congenital Phymosis.

M. FLEURY read an essay in which he enlarged upon the inconveniences and evils of congenital phymosis, and stated that circumcision is the only cure. He had performed it in twenty-three cases out of twenty-seven.

Hospital and Infirmary Reports.

ST. GEORGE'S HOSPITAL.

REPORTED BY DR. BARCLAY,
Medical Registrar.

Severe Lesions of the Brain.

JAMES C., æt. 51, was first admitted into St. George's Hospital on the 7th May, 1851, under the care of Dr. Page: when he stated that he had caught cold a fortnight previously, and was at that time suffering from cough, with pains in all his limbs, but especially in the neck and throat, with some difficulty in swallowing; the pulse was quick; the tongue coated; and he had on his lip a pustular eruption, which he said had come out a day or two after his cold commenced, and seemed to be of the nature of sychosis: he had a cachectic appearance, and a discharge from the left ear.

During his continuance in the hospital nothing of any importance occurred; the lungs were only affected with bronchitis, from which he very gradually recovered; but when made an out-patient, at his own desire, on the 18th of June, he had still discharge from the ear, and some pain of the head, with great depression of spirits. He said he felt better, but he was listless, and disposed to keep his bed. Blisters had been applied behind the ears; he had been very slowly brought under the influence of mercury by giving small doses of grey powder; iodine had been at one time ordered, and latterly bitter tonics. The general symptoms were such as to lead to the suspicion of slowly progressing disease of the brain, but there was no direct evidence of its existence, either in the loss of muscular power or in the condition of the mental faculties.

On leaving the house, it appeared that he had been seized with pain all over him, which had terminated in a fit, insensibility continuing all next day. When re-admitted on the 21st June, he was in great measure conscious, but was very depressed, speaking slowly, and chiefly incoherently; the tongue was coated, and the pulse was very feeble;

the bowels were opened by castor oil, and the motion was natural and healthy. He slept a great deal, and seemed gradually to become more confused in intellect, without being at any time noisy or delirious. Blisters were twice applied behind the ears, and the discharge almost ceased before death. He continued to sink, making no complaint of pain; passing his urine under him in bed, but sufficiently conscious not to pass his motions without giving notice to the nurse. There was no paralysis, but the powers of life seemed gradually to fail, and at last he sank quietly, and died on the morning of the 29th. Stimulants in addition to the blisters were chiefly administered during his last period in the hospital.

Post-mortem examination 36 hours after death.

The body was in moderately good condition, and well-formed.

Cranium.—On removing the skull-cap the dura mater was found firmly attached along the superior longitudinal sinus, and the Pacchionian bodies were prominent. It was also attached posteriorly over the posterior parts of both hemispheres, and that portion covering the anterior surface of the petrous portion of the temporal bone was ulcerated through to about the extent of a fourpenny piece, the edges of the aperture were dark; and it corresponded to caries of the temporal bone at this spot. The left hemisphere was considerably lacerated in the attempt to remove the skull-cap, owing to the adhesions; and a considerable quantity of pus escaped.

The upper portion of both hemispheres was of a darkish blood-red colour, as if at first sight from extreme ecchymosis, but ascertained to be dependent merely on a large amount of fluid blood in the vessels of the pia mater. The whole structure of the brain was softer than natural, and the left hemisphere especially so; it was firmly adherent to the carious portion of the temporal bone already mentioned. In the centre of the left hemisphere, amid the most softened part, was a collection of purulent matter contained in a distinct and firm capsule. The structures bounding the lateral ventricles were much softened, and the ventricles contained a quantity of shreddy semi-purulent fluid; the septum was broken down. The left lobe of the cerebellum was considerably compressed and flattened laterally, apparently by the enlargement of the cerebral hemisphere. In the sinuses as well as in the large veins of the membranes were extensive clots of light-coloured fibrin. The arterics at the base of the brain were atheromatous. The bones of the skull generally were somewhat thin and soft.

Thorax.—Spinal adhesions existed on the right side, and the pleura was thickened and opaque; the lower lobe of the right lung was greatly engorged, and a thick dark red fluid oozed out on pressure; it sunk in water. The rest of the lung, though congested, did not sink. The heart was small, and the right ventricle somewhat attenuated. A thin soft deposit of recent lymph was found on one of the flaps of the aortic valve; otherwise the valves and orifices were natural. There was some atheroma at the root of the aorta.

Abdomen.—The kidneys were congested, but healthy in structure, their surfaces and the lining membrane of their pelves being vascular; the latter also containing some sabulous matter. In the veins of the liver there was much fluid blood; its structure, as well as that of the spleen and other abdominal viscera, appeared to be healthy.

The case just detailed affords additional evidence how varied are the symptoms arising from analogous conditions of the encephalon. Judging from the post-mortem appearance only, it presents a very great similarity to the two cases detailed in a former number of this Journal (p. 643, et seq.), but how different the progress of its history! Arising apparently from the same cause as the first of those, or at least associated with the same condition of caries of the temporal bone, there was here an additional reason for the disintegration of the nervous centres in the atheromatous condition of the arteries at the base of the brain, which has been long recognised as a cause of softening of the brain, and consequently that condition was here more marked. This patient happened to be much longer under observation than any of the preceding ones, and an earlier stage of the disease is disclosed, which was marked by no symptoms directly traceable to the brain, beyond a condition of depression of spirits resembling hypochondriasis, which, indeed, in their association with discharge from the ear, were alarming, but which cannot of themselves be regarded as evidence of irreparable mischief.

Perhaps all the cases of circumscribed, or, as Dr. Abercrombie calls it, "encysted abscess of the brain," have some such history, when they come sufficiently early under observation; and it may be that these are the only symptoms by which the disease in its earlier stages can make itself manifest; but from their comparatively trifling nature they are overlooked by the patient himself and his friends, and he would be merely reported to have been ailing and out of sorts. Then comes a period when for some reason or other inflammation spreads to the surrounding structures, and in one case there will be

violent delirium approaching to mania, in another it will be indicated by a fit somewhat intermediate between the epileptic and apoplectic seizure, from which there is partial recovery, while in a third the progress of the case is only marked by paralysis more or less limited.

The second condition was that which characterised the case now under consideration, and a reference to the case narrated at p. 477 will justify the conclusion that this seizure marked the transition from the more slow and chronic disease which had been previously existing, to the more acute and more rapidly fatal inflammatory action which accompanied its close. Here the coma was not so deep, and the progress of the case was not so rapid, while the restoration of consciousness was more distinct; but in both, there was a sudden loss of consciousness, followed by partial restoration, which seemed to correspond to the post-mortem appearance of recent inflammation, associated with, and yet distinct from, the old lesion which in each was of a totally different nature. It is difficult to account for the absence of paralysis with such an amount of softening as was here found, except in so far as it may have depended on the particular portion of the cerebrum especially implicated.

KING'S COLLEGE.

Fungus Hæmatodes of the Breast.

It is an interesting question, and one somewhat difficult of being properly solved, in the present state of our knowledge at least, as to what is the result of operations performed upon the female mamma in malignant diseases of that organ, and how far the surgeon is justified in having resort to the use of the knife for the cure or relief of these diseases. The experience of some eminent men has been such as to induce them to resort to and recommend the employment of the knife for the extirpation of cancerous tumours of the female breast. There are certain cases to be met with in which probably the knife ought certainly never to be used, although on first consideration there would appear to be every inducement to employ it; so far so, in fact, that the poor patient who applies for relief is greatly astonished that the surgeon will not employ his knife. We allude to cases of fungus hæmatodes of the breast, a disease of itself greatly different from the ordinary hard cancer of the breast, both in its appearance, growth, and in the rapidity of its results.

A case has just been discharged from under Mr. Fergusson's care which exem-

plifies the propriety of not interfering with such growths as these. The woman, who was between thirty and forty years of age, was sent up all the way from Yorkshire for the purpose of having an operation performed upon her. Upon examination, a large tumour, the size nearly of a man's head, was found to be involving the right mamma; it was hard and not very moveable, and the skin on it presented that dark bluish appearance varying here and there with the deeper purple colour, which is one of the characteristics of a fungoid tumour; at the lower point of the tumour was a distinct cyst about the size of an egg, which appeared to contain a straw-coloured fluid resembling serum. The veins of the skin over the front of the chest nearest the disease were very large and prominent. On examination of the axilla on the same side a distinct enlargement of the glands was discovered there. The patient stated that the tumour had commenced in the breast only about ten months since, and in this comparatively short space of time had increased to its present size. She was very anxious to have the operation performed. Mr. Fergusson examined the patient very carefully, and decided that the tumour was of that character termed fungus hæmatodes, and declined interfering with the knife, as he thought that no benefit would possibly accrue from any operative procedure. In some cases of ordinary scirrhus of the mamma there cannot be much doubt that excision of the diseased part at a very early period of its growth may be followed if not by a cure at least by a diminution of pain and duration of the disease, but this cannot be expected if any secondary mischief should have already shown itself in the form of implication of the axillary glands in the disease; so that, in fact, it is perhaps undesirable to extirpate a diseased mamma when the glands are at all affected, unless there are some peculiar circumstances existing which would render an operation advisable. In fungus hæmatodes, however, of the same organ, it is a great question as to whether any good results can ever occur from operating even at an early period. In this disease there is a peculiar malignancy, marked by its great rapidity of growth, by its implication of other parts of the body, besides that in which it is visible, and by its almost certain tendency to redevelop itself quickly in the same spot from whence it had been removed by the surgeon's knife, or in some other part. What has fallen under our own observation has shown the impossibility of doing any good in the greater majority of cases of fungoid tumour by operation: nevertheless, even these questionable results,—the hope on the patient's mind of getting some respite from disease,

and a desire on the part of the surgeon to use the last resource of his art, with the hope wished for, but not much expected, of doing some good, will be sufficient to induce some to extirpate fungoid tumours of the breast and other parts whilst they are in an early period of growth. But if any secondary manifestation has already shown itself, it will be a most injudicious thing for the surgeon to interfere. In the case just mentioned, although the skin over the tumour had not yet ulcerated, showing that it had not approached its last stage, still the enlargement in the axilla existed, and this was quite sufficient to deter Mr. Fergusson from using the knife. It is very probable that this poor woman will live longer with her disease untouched than if any operation had been performed, for there is very good reason to believe that, in cases of fungus hæmatodes especially, the local excitement of the operation brings on a return of the disease, increases its rapidity of growth, and hurries the patient on to a more early grave than otherwise would have been the case.

ST. LOUIS HOSPITAL, PARIS.

Cases of Erythematous Lupus. Under the care of M. CAZENAVE.

UNDER the name of Lupus, a disease is denoted which announces itself sometimes by spots of a reddish violet colour, in a great number of cases, by voluminous livid indolent tubercles, characterized by a tendency to destroy the surrounding and subjacent tissues, producing a malignant ichorous ulceration, covered with a firmly adherent brown crust, which falling off, exposes fresh destruction to view. The essential character of lupus is this tendency to destroy adjacent structures—a tendency not confined to the worst forms of the disease, but exhibited also in the more benign forms, if indeed any form of the disease can be called benign.

Lupus presents great differences in its seat, and in the rapidity and extent of its ravages; but among these differences certain diversities may be observed in the mode of ulceration, and the form of the covering of the ulcer. Sometimes it is seen destroying the surface, and in this form presenting two principal varieties,—the erythematous and the tubercular lupus, with or without hypertrophy. With these varieties may be conjoined the serpiginous lupus which assumes a syphilitic aspect. Sometimes the disease is perceived destroying more deeply; and this is its more serious form, since it ordinarily does not subside

until it has caused great loss of substance, and its cure is only obtained with numerous indelible and disfiguring cicatrices.

One variety of superficial lupus, the erythematous, has not hitherto been accurately described, and has not received the attention which it merits, since it is that form which presents the greatest chances of success in treatment. By Bielt it was described under the name of centrifugal erythema, because the papular point or rounded spot by which it commences extends excentrically, and occasionally to such an extent as to involve the greater part of the face. Bielt observed that this erythema leaves an habitual depression on the skin. This last feature has induced M. Cazenave to class it with lupus, where it finds its natural place.*

Like other varieties of lupus, the erythematous form attacks the face almost exclusively. It appears on the cheeks or forehead, in the form of a rounded red spot the size of a two-franc piece, slightly elevated, extending circularly, the redness disappearing under the pressure of the finger; resembling urticaria, except that it is not attended with so much swelling of the surface, and does not disappear: it is unattended with itching, and when it subsides leaves a superficial cicatrix like that of a burn, which is not seen after urticaria.

In another and much more common form, there is observed at the end of the nose in cold weather, a redness resembling chilblain, subsiding, then reappearing to subside and again to return, until it at last becomes persistent. The pain is not severe, but there is a smarting sensation when the patient exposes himself to a sudden change of temperature, or commits an excess of any kind. As this form usually appears in persons having fine fair skins, and who are prone to chilblains, it usually attracts little or no attention at first. The redness remains limited to the extremity of the nose, rarely invading it entirely; it is accompanied with a slight degree of tumefaction; after a time, however, the skin becomes thinned, and a real exfoliation takes place at the expense of the skin itself. This form is common in females.

Lastly, in two other varieties, the epidemic exfoliation progresses more rapidly; it appears as if the cutaneous laminae were pushed off one after the other, until the skin is destroyed by successive desquamation. In males, the desquamation takes place in a more favourable manner; it is more general; the skin presents depressions similar to bites, there is a true loss of substance, redness is perceptible at the cir-

cumference; in some cases an exudation occurs, furnished probably by the follicles.

To recapitulate: erythematous lupus constitutes a very remarkable form of the disease, presenting three principal characters,—erythematous redness, disappearing under the pressure of the finger, exfoliation and gradual shining of the skin; lastly, the formation of a slight cicatrix resembling that of a superficial burn or bite, but not proceeding to ulceration. The pain is trifling, and felt only on touching, after violent exercise, or excess in drinking. The chosen seat of lupus is the nose, cheeks, chin, or more rarely the external ear or scalp, or more rarely still the neck and hands.

M. Cazenave exhibited to the students of his clinique four examples of this affection.

1. A man, thirty years of age, of a tolerably good constitution, who had never suffered any serious illness, nor had an attack of syphilis; he had only had scabies in his infancy. He had perceived during the cold weather of last winter that several considerable-sized red spots appeared on his left cheek. Of these spots, those which remained were slightly punctate, the others less characteristic, and the skin merely thin. This man had only felt smarting when exposed to heat or the sun's rays.

2. A man, aged thirty-eight years, of a strong and robust habit, subject to plethora and inflammatory disorders, addicted to spirit-drinking, exhibited an extensive vivid red discolouration on his two cheeks, lower lip, superciliary arches, external ears, and almost over the whole face; the redness disappeared on pressure by the finger, which produced puffiness of the cellular tissue. The reddened surface presented furfuraceous scales, and at the margin of the spots the signs of cicatrices of the skin. Several similar papular appearances were perceptible on the hand.

3. A man, aged forty-four years, of a healthy constitution, having a sister suffering under the eating form of lupus, had perceived during the winters of five or six years that the left side of his face was the seat of redness which principally attacked the cheek and nostril. At the points occupied by this redness one could still perceive the traces of bite-like cicatrices.

4. A man, thirty-three years of age, who had also suffered in the same manner during the winter, presented the peculiarity that an exudation resembling the secretion of acne, was observed to proceed from the red patches.

M. Cazenave offered the following considerations in reference to the etiology, diagnosis, and treatment of the erythematous lupus:—

* This form of disease will be found admirably depicted in Mr. Erasmus Wilson's beautiful illustrations of skin disease.

What is the cause of this form of lupus? In the first place, it is distinguished from other forms with regard to age, since these are generally met with from ten to eighteen years of age; this is seldom seen except in middle age from twenty to thirty, or thirty to forty years of age, in males. An hereditary predisposition does not seem so well established as in other forms. This form usually appears in the midst of good health, while the other form is generally developed in lymphatic or strumous subjects, although persons are met with among these who have always enjoyed good health. The syphilitic virus does not seem to have any influence in its development. With reference to the influence of spirit drinking, M. Cazenave stated that the remarks of Samuel Plumbe on the influence of this habit in the production of other forms of lupus are equally applicable to the erythematous variety. Intemperance predisposes thereto by the production of local congestions. At other times it seems to originate in deficiency of food. Most frequently it is caused by cold.

The diagnosis of this affection does not present any serious difficulties. It may readily be mistaken for erythema, urticaria, psoriasis, or pityriasis; neither of these affections, however, has for its result the gradual thinning of the skin, leaving the superficial cicatrices by which this is marked.

The treatment consists in the application of moderate stimulants. While the disease is recent, it is perhaps better to confine the treatment to the administration of internal remedies, *e. g.* to bitters. In the chronic state the most suitable applications are ammoniacal solutions. In general, M. Cazenave observes, ointments suit less than lotions. The vapour bath is of great service. The benefits of internal remedies must be waited for a long time; these consist chiefly of sudorifics and laxatives.

OBITUARY.

ON the 5th inst., at No. 28, Cross Street, Islington, aged 62, Robert Semple, Esq., Member of the Royal College of Surgeons, for nearly 40 years medical officer to the parish of St. Mary, Islington.

On the 6th instant, at Richmond, of paralysis, in the 49th year of his age, James Barrow Dodd, surgeon, &c., late of Stockwell, Surrey.

On the 8th instant, deeply lamented, L. R. Hooper, Esq., M.D., of 5, High Street, Newington-butts, æt. 55.

Correspondence.

SIX PAPERS ON THE CLASS OF MEDICAL LITERATURE MOST NEEDED IN THE PRESENT DAY. ADDRESSED TO MEDICAL STUDENTS. BY HORACE DOBELL, MEMBER OF THE ROYAL COLLEGE OF SURGEONS.

No. V.

Comparison of the state of knowledge and of the human intellect at the present time with their state in the "philosophical period," concluded—Four sources of fallacy to be guarded against in making this comparison—The results of such a guarded comparison.

THE facts which would be most important to the discovery of the causes of disease, are those in anatomy, physiology, and morbid anatomy. I know no better medium through which to gain an idea of the state of knowledge in these matters, than an examination of that possessed by Hippocrates and his cotemporaries, who lived in the "philosophical period," and therefore had the knowledge of the one which preceded it. MM. Littré and Renouard have taken especial pains to ascertain this point, and I think, therefore, that I cannot do better than quote the result of their labours. M. Renouard says: "Neither Hippocrates, nor his descendants, ever dissected human bodies; the religious respect which they had for the dead, throughout Greece, prevented it. It is difficult to find in their writings even some general idea of the form, volume, and respective position of the principal viscera. Osteology alone is treated with any accuracy; and this fact has been explained by a tradition, which says, that the Asclepiades of Cos preserved in their school a human skeleton for the instruction of their pupils. They had been able, moreover, to acquire some knowledge of internal parts by examining victims, in dressing wounds by which the visceral cavities had been opened, and by dissecting animals. Such are, according to the opinion of nearly all historians and critics, the sources from which the members of the Hippocrates family had been able to draw their anatomical knowledge."* But M. Littré denies that Hippocrates had ever dissected animals, or that he had in his possession a true skeleton. "Physiology, as we understand it at the present day,—that is to say, that branch of the science of man which is concerned in describing the functions of each organic texture,—could not possibly make any steps

* Renouard, op. cit.

without being guided by the lights of anatomy. It is not astonishing, therefore, that we can scarcely find any traces of it in the works of Hippocrates.*

Such, then, is a slight sketch of the condition of knowledge in anatomy and physiology at the time when men began to attempt philosophical reasoning in medical science; and it scarcely needs observing that if the natural conditions of parts, and their functions during health, were not understood, it was impossible that the changes of disease, and the consequent deviations of function, could be appreciated; therefore morbid anatomy must have been even less understood than the anatomy and physiology of health.

We have to make a comparison between this state of things and the present condition of knowledge upon similar subjects. In the first place we observe, that while the philosophical period was only the third in the history of medicine, there have been no less than five periods since that time. Whatever knowledge has been gained during these twenty-one centuries has of course been added to that possessed at the epoch referred to. It is particularly to be remembered that the first part of this time was characterised by the discoveries of Galen and his followers, and was so peculiarly rich in anatomical improvements as to have gained the title of the "anatomical period." And it is well known how much anatomy, physiology, and pathology, have been studied in later years. As I have not space for a minute and lengthy analysis, I think I cannot adopt a more just method of comparison, than that of taking the works written on the different subjects during the present age, and during or before the "philosophical period." What comparison can there be between the anatomical works of Hippocrates, or Herophilus, or Aristotle, and those of Cruveilhier, Harrison, Quain, and others? Or, in comparative anatomy, how shall we compare Aristotle's "Nine Books on Animals" with the works of Hunter, Müller, Marshall Hall, Paget, Todd, Carpenter, Baly, &c.? In morbid anatomy I might refer to parts of Hippocrates, but it would be too ridiculous to compare the writings of any of the ancients of that date on this subject with the modern works upon the same,—with Cruveilhier, Carswell, or Rokitsansky; and still more ridiculous to compare the knowledge of the ancients with the yet unwritten knowledge of morbid anatomy possessed in our own time. Or let us turn to surgery. I am at a loss to find any work containing sufficient surgical knowledge to render it worthy to be compared with the works on surgery of

the present day. What comparison can the Aphorisms of Hippocrates bear with Cooper's Dictionary; the "Cyclopædia of Practical Medicine;" "l'Encyclographie générale de la Médecine;" or with the medical works of Watson, Laennec, Graves, Latham, &c.,—Hippocrates' "Airs, Waters, and Places" with modern books on similar subjects? Or the works on clinical medicine which were the best of those published before the christian era; how little they will bear comparison with those of the present day. It is not necessary to multiply examples any further; it must be evident to those who have perused the works of the ancients and of the moderns, or paid a careful attention to the subject, that the difference between them is immense;—is such as would be expected to be worked during twenty centuries: that whereas at the time of the philosophical period there were but a few well-attested facts in anatomy, physiology, and pathology, the amount of facts now existing is too large for us to form any just estimate of their number,—a number greater than it is possible for us to calculate or make use of in their present scattered condition.

The second element of science, viz., ideas—the inward effort of thought—must now be considered: we must examine the comparative conditions of the human intellect at the present and at the "philosophical period." We cannot, of course, do this generally; the subject is too extensive for the present space. We must be content to confine our examination to the state of the intellect with respect to the subject under immediate consideration—the power of producing ideas—and, as it has been before stated, of appropriate ideas.

Facts and ideas, or sense and reason, are perfectly distinct from one another—the one can in no case be a substitute for the other, but they are in many cases inseparably connected. Facts cannot exist in the mind without ideas—we cannot become conscious of an object of sense without having an idea of sensation; therefore, if every fact is necessarily connected with a certain number of ideas, it is evident that an increase of facts is attended with a corresponding increase of ideas; consequently, having proved an increase in the number of facts possessed in medical and surgical subjects, we have also proved an increase in the amount of attendant ideas. But, although sensation is necessarily attended with ideas, ideas may be the product of the mind, independent of sensation. It is possible, therefore, that two periods of time being given, the one characterised by a large number of facts, the other by a small number, the period containing the larger number of facts may possess the

* Ibid.

smaller number of ideas, and also the converse of this—the mind being more active in the period characterised by the small number of facts, than in that having the larger number. Therefore, before we can decide whether ideas are more numerous in the present age than they were in the philosophical, it must be ascertained what is the character of the human intellect with respect to the power of producing ideas independent of sensation. This is a question of great difficulty, because open to so many sources of fallacy, among which may be mentioned the following:—1st, the great difference between the facilities now offered of recording ideas, and those presented in the earlier ages of the world. This is a very important consideration, because we have scarcely any other mode of judging the minds of the ancients than that of observing their works. These were produced at immense cost and labour; therefore they were more limited, and it was more difficult for a philosopher to record his ideas than in the present day: added to this we must not forget how many of the choicest works of authors who lived before the year 320 B.C., of the very authors we are now considering, have been destroyed. The circumstances of the case, then, dispose us to attribute fewer ideas to the ancients than they might have possessed; while, on the other hand, the circumstances of the present day dispose us to appreciate fully the amount of ideas possessed in the age in which we live. This source of fallacy must be remembered. 2d, we must observe that each age is marked by some change in the character of the ideas most numerous in it: there is a particular character to the ideas prevalent in each period. It will readily be conceived that some ideas require a much more powerful effort of thought for their production, some an effort much less powerful; that the degree of power requisite for the production of an idea will correspond to the character of the idea. The same mental power, therefore, which would produce one idea of a certain character, might produce ten or more of some other, or might not be sufficient to produce one idea of a third character, and in the latter case would fail to leave any record of its having existed at all. Hence it is clear that not only the number of ideas, but the character of those ideas, must be ascertained before it can be determined what capacity there was in the human intellect at any particular period for producing ideas. I believe that our knowledge of the comparative amount of mental effort necessary for the production of different ideas, is so imperfect, that this is, at present, an unavoidable source of fallacy in our computation of the condition of the

human intellect with respect to its capability of producing ideas at any required period. 3. It appears to me that there is this further source of fallacy in the present matter: the degree of mental power required to form a new idea must be far greater than that needed to understand and adopt an idea of equal value already formed by another intellect; and this brings us to the necessity of distinguishing carefully between original and adopted ideas. In proportion as we turn to more and more remote periods in the history of man, as we approach nearer to his first creation, out of any given number of ideas taken from the general mass the amount of original ideas will be greater; therefore, although the whole number of ideas possessed at any given time might be less than at the present period, yet the number of new ideas therein might be much greater: so that we have not only to distinguish the character of the ideas, and the degree of mental power necessary to that character, but also to distinguish between original and adopted ideas. Again, I apprehend there is this fourth source of fallacy. Whatever be that property of the human intellect which is necessary to the production of an idea, that property, the strength of which determines the power with which ideas are formed, would seem to be the same that is required for the *adoption* of an idea; understanding by “adoption” that the idea of one mind be added to the possessions of another. I am not prepared, at present, to state this as a certainty; but supposing it to be the case, we may imagine that the power which would be sufficient to produce one idea would be adequate to the adoption of several: it is evident if the same power be expended in the formation as in the adoption of ideas, that, in proportion as human knowledge accumulates—as the amount of ideas adopted increases—there must either be an increase of mental power or a diminished capacity in each mind for the production of new ideas. This source of fallacy would act in a contrary direction to those before stated, while they expose us to the danger of depreciating the power of the human intellect in former days; the last circumstances mentioned, on the other hand, dispose us to undervalue the power of the human intellect in the present day.

It is evident, from these considerations, that it is extremely difficult to determine the relative power of the mind to produce ideas in different ages of the world. Notwithstanding, however, all these difficulties and sources of fallacy, I firmly believe that a careful review of the history of human knowledge, a careful comparison of periods, is correct, in leading us to the conclusion, that, in the present period, there is a very

great power of producing ideas—a power very equally spread among civilised people—much greater in amount than that possessed in the period called “philosophical.” We have, therefore, an increased amount of facts,—an increased supply of ideas attendant upon these facts,—and an increased power of creating new ideas. Hence we find the two elements of science—“facts and ideas”—or sense and reason, possessed by civilized man in the present age. One other point in connection with this has yet to be determined; viz., how far the ideas are appropriate to the facts—how far that which Prof. Whewell considers to be the chief cause of failure in the Greek schools of philosophy is remedied in the present day. Unfortunately this is, like the last, a subject on which a whole treatise might be written, and yet leave the question imperfectly answered; it is one, therefore, almost impossible to treat in the present place. The proper course to be pursued in determining this matter would be, to take a certain number of general truths—to observe every fact concerned in the process of their induction—to ascertain the exact number of minds which had reviewed these facts with the desire to reason upon them; to ascertain the result of the review taken by each of these minds; to set down all these points in order, and to place beside them all the circumstances surrounding each individual at the time his mind was directed to the facts in question: having done this with a certain number of truths discovered in one period of the history of science, to repeat the process with a similar number taken from each period, from the commencement of the history down to the present day. I believe that the result of such an examination of the subject would be a tolerably correct notion of the comparative appropriateness of ideas to facts, in the present and past ages. This plan cannot be followed out here, but by adopting it I believe that we shall find the ideas of the present period are far more appropriate to the facts possessed than they have ever been before, and this particularly as relates to medical and surgical subjects. An improved knowledge of what is right necessarily leads the mind towards a more correct idea of what is wrong: thus the important improvements in a knowledge of the anatomy of parts during health must lead the mind towards a more correct idea of what is altered under conditions of disease. A knowledge of healthy actions must lead the mind towards a right course of ideas concerning deviations from healthy actions: thus the late great additions to a knowledge of the physiology of healthy textures must render ideas concerning that of unhealthy textures more

appropriate. A knowledge of the circumstances under which certain known processes arise, will direct the mind to the formation of a more appropriate set of ideas, when certain circumstances are presented, and it is required to know what processes will coexist with them. An acquaintance with the circumstances attending a state of health in the body, with the processes then going on, and with their effects, will lead the mind to an appropriate set of ideas when it is required to discover the cause of changes in these effects. Therefore, the present condition of knowledge in anatomy, physiology, and morbid anatomy, renders the ideas connected with the facts presented by diseases more appropriate than they could possibly have been when this knowledge was less complete.

A very prolific source of support to my assertion that ideas at the present day are more appropriate to facts than they were in by-gone ages, may be found in an observation of the experiments performed in different branches of scientific investigation at the present and in remote periods. Compare, for example, the experiments of chemists—those of Davy, of Faraday, or Liebig, so well planned—so well directed for the discovery of the desired truth, and therefore suggested by such an appropriate set of ideas—compare these with the vague, unreasonable, and objectless experiments of alchemy. Take Mechanics, for a second example: compare the attempts made at the present day, when it is desired to discover new powers, or new applications of powers in machinery, with the blundering attempts of the ancients (with a few memorable exceptions) to do the same things, and we can but notice how peculiarly appropriate the ideas are to given facts in the present day: the effect of this is seen in the number of new applications and new directions given to mechanical forces. I might point to a third example, among Arts and Manufactures: do we not see an evidence of appropriateness of idea in the readiness with which demands are answered when the discovery of any new article in these provinces is called for, and in the admirably appropriate form in which it appears, exactly suited to the necessities of the case? I believe we shall find no stronger or more marked confirmation of the truth, that facts in the present age are associated with ideas far more appropriate than they have ever been in past days, than the disappearance of superstition from the human mind presents us with. Superstition appears to be a result of the association of inappropriate ideas with the objects presented to the senses, and, as more appropriate ideas are formed in the mind, superstition ceases to exist. The difference with respect to the prevalence of super-

tion observable in the periods prior to he "philosophical," and in that epoch itself compared with the age in which we now live, is peculiarly striking.

[To be continued.]

ABOLITION OF RESTRAINT IN THE TREATMENT OF THE INSANE.

SIR,—In a late number of your valuable journal, you assert, on the authority of Mr. Pierce, that "to Dr. Charlesworth is due all the credit of originality" in the abolition of restraint, and that "Mr. Hill was simply one of the later associates of Dr. Charlesworth, and took his share therein when the experiment was just completed."

Now as I happen to *know* that this statement is not correct,—as it is in the highest degree unjust to Mr. Hill, and as neither Mr. Pierce, nor Dr. Charlesworth, nor any other governor of the Asylum, can produce, from its records, *one single document* in proof of this assertion,—I hope you will allow me, not merely to *assert*, but to *prove*, that your former account (Vol. xlvi. page 417, Sept. 6th, 1850) of the introduction of non-restraint by Mr. R. Gardiner Hill, is the true one.

I was in constant correspondence with Mr. Hill at the time when he first announced to the governors his confident belief in the practicability of abolishing all restraint, and when he demonstrated the soundness of his theory, by his complete success in carrying it out. I was fully acquainted with the surprise it occasioned, with Dr. Charlesworth's approval and support of the system and its author, with the opposition it called forth, the foul and scandalous abuse heaped upon Mr. Hill by various anonymous and other writers, and its ultimate triumph over all opposition, prejudice, calumny, and misrepresentation. I read carefully all the reports:—I took a lively,—I may say, intense interest in the success of Mr. Hill's "original" and "bold conception;" and therefore he, knowing this, kindly forwarded to me a history of all the cases upon which he founded his inductive reasoning; and when he published his interesting and valuable lecture on the total abolition of restraint, I assisted him, (almost overwhelmed as he then was with the labours and anxieties of his responsible undertaking), in preparing that lecture for the press: I therefore flatter myself that I know as much of the history of "total abolition of restraint," as it occurred in the Lincoln Asylum, as some governors even of years' standing.

But I will let *documents* tell the faithful tale:—

First, of the state of the Lincoln Asy-

lum, and the prospects of total abolition, previous to Mr. Hill's appointment in July 1835.

1. In July, in August, and so late as December 29th, 1834, new and improved instruments of restraint for day and night use were ordered, to prevent, if possible, the patients from injuring themselves *with them*, "as they had often done;" and minute directions were given that "they should be of the best workmanship and polish," and "made so as to be locked by one key," "of which a duplicate should be *hung up in each restraint room*." (See Report for 1834).

No signs of abolition in 1834!

2. The eleventh annual report, April 1835, states, that "the object of restraint is not punishment but security;" and recommends "*four simple methods*," as they are called, which nevertheless might occasion intense suffering if the patients were restive;—for who can chain a man or woman by the wrist or ankle to a bedstead without occasioning suffering, if the patient should struggle?

This declaration was made by the board of the Lincoln Asylum only three months previous to Mr. Hill's appointment as house-surgeon; and it *proves* that "abolition of restraint" *was not at that time completed*, although Dr. Charlesworth was then, as afterwards, one of the non-resident visiting physicians.

3. Mr. Hadwen, the immediate predecessor of Mr. Hill, whom he calls "the author of the *brilliant conception* that restraint is never necessary," goes further than this: he tells us that restraint is *essential*, not only to *security*, but to *the recovery of the patient*. His words are:—"Restraint forms the very basis and principle on which the sound treatment of lunatics is founded. The judicious and appropriate adaptation of the various modifications of this powerful means to the peculiarities of each case of insanity, comprises a large portion of the curative *régime* of the scientific and rational practitioner; in his hands it is a remedial agent of the very first importance; and it appears to me that it is about as likely to be dispensed with *in the cure* of mental diseases, as that the various articles of the *materia medica* will be altogether dispensed with in the cure of the bodily." (Mr. Hadwen's letter to the *Times*, January 25th, 1841). He further says, that "Mr. Hill's curious and heterodox opinion, that restraint is never necessary, never justifiable, but always injurious in all cases of lunacy whatever, is more remarkable for its rashness even than its boldness." (Mr. Hadwen's letter to the *Lancet*, Oct. 1st, 1840.)

Mr. Hadwen, you will observe, ineredulous as he was with respect to the possibility

of carrying out the system, gives "all the credit of originality," not to Dr. Charlesworth, but to Mr. Hill.

4. Sir E. Ff. Bromhead, Bart., Vice-President of the Lincoln Asylum, states emphatically that "*the governors never expressed a wish for the extinction of restraints; they never expected it; not one of them deemed it possible.*" Dr. Charlesworth is a governor; so is Mr. Pierce: but neither of them ever "expressed a wish for the extinction of restraints;" they "never expected it;" neither of them "deemed it possible." So says Sir E. Ff. Bromhead—and here we have the truth. How, then, could Dr. Charlesworth be the originator of the system, and Mr. Hill only a later associate of his, when the system itself did not exist, and was not thought of, until Mr. Hill's announcement and verification of it! Mr. Pierce himself declares that his friend "Dr. Charlesworth was too cautious and philosophic to assume such a result on inadequate induction!" I need scarcely remark the singular inconsistency of Mr. Pierce's statements.

Moreover, Dr. Charlesworth was only one of three non-resident physicians, visiting the Asylum, *as such*, in monthly rotation; and therefore he *could not* have originated such a system, nor carried it out practically if he had: "the responsibility could but rest," as Mr. Pierce truly observes, "with the resident officer;" i. e. the house-surgeon, who had the practical management of restraint. It is evident that no one else *could* work it out. Hence, as Mr. Pierce admits the "original idea," or "*guess*," as he sarcastically calls it, to be Mr. Hill's, and as Mr. Hill also "worked it out," therefore he is the author of the system.

The fact is, that, as regards this grand discovery, Dr. Charlesworth was an associate of Mr. Hill's, and (to his honour be it spoken!) supported Mr. Hill through all obloquy and misrepresentation, by the weight of his influence: as he himself declared to Dr. Granville, "he was the greatest friend of the system, as well as of the originator of it."

5. The system of the Lincoln Asylum, previous to Mr. Hill's appointment, was that of "a humane mitigation of restraint, as far as was deemed consistent with safety." This was also the system of many other Asylums besides Lincoln, but none of them dreamt of "total abolition."

It was "Mr. Hill, who had the courage to broach the original and invaluable idea, that the use of instruments might be wholly dispensed with," declares Sir E. Ff. Bromhead; and with this testimony agree all the documents of the Asylum in which "non-restraint" originated.—For

Secondly, the simple *unbiased* history

of the abolition of restraint is contained in the reports of the years 1837 and 1838, drawn up by Dr. Charlesworth, and signed respectively by Mr. Pierce and himself as the chairmen. It was not therefore an ignorant or misguided set of directors, who gave Mr. Hill the credit of originating "non-restraint," but it was assigned to him by that very physician upon whom Mr. Pierce would now, in direct contradiction of his own testimony in 1837, most willingly "*thrust*" the honour. *Why?*—because the system has triumphed over all opposition, and by the force of its intrinsic worth has established itself throughout the length and breadth of the land. *Had it failed*, no Mr. Pierce would have claimed it for Mr. Charlesworth. The signature of 1837, "W. M. PIERCE, CHAIRMAN," would have proved the "*rash*" attempt to be "the raving of the theoretic visionary" Mr. Hill; and the "*cautious and philosophic* Dr. Charlesworth" would have had the credit of having given the "*Utopian*" system a fair trial.

But it has NOT failed: and therefore the very man who, at the time of its origin, attests by his signature that it originated with Mr. Hill, *now after a lapse of 14 years*, attempts to "father" it upon Dr. Charlesworth! And it would appear by Dr. Charlesworth's present silence under this undeserved load of honour, that he is not unwilling to appropriate to himself the compliment of his friend, if he may be allowed to do so. Why else does he not, as he has done before, honourably disavow the claim set up for him by another? For though Dr. Charlesworth is now silent on the matter,—although he has "*generously*" allowed Mr. Pierce's unfounded assertion to go forth to the world uncontradicted,—yet he *has* spoken out plainly enough, and *spoken the truth!* Let us hear what he said.

1. The Report of 1837, drawn up by Dr. Charlesworth, and for which he received the thanks of the Board, simply states that Mr. Hill had expressed his belief, founded on experience in that house, "that a total abolition of restraint was practicable," and that he "had made a striking advance towards verifying his opinion, by conducting the male, the complicated side of the house, with but a solitary instance of such restraint, either by day or by night, and that applied only to about six hours, *during his absence.*" This *proves* that the "*bold conception*" originated with Mr. Hill; that he verified his theory to the satisfaction of the physician and other governors; and that when he happened to be absent, though only for a short time, they could not *then* carry on his system without him—they *were obliged to have re-*

course to restraint again! This report was signed by "W. M. Pierce, Chairman."

In the report of 1838, there is an increased confidence declared in the soundness of Mr. Hill's views, which confidence the experience of every subsequent year confirmed. The Report of 1838 was signed by Dr. Charlesworth, and it declares that "the bold conception of pushing *the mitigation of restraint*," (the previous system of the Lincoln Asylum), "to the extent of actually and formally abolishing the practice," ("total abolition," or "non-restraint"), "mentioned in the last report as due to Mr. Hill, the house-surgeon," seemed to be justified by experience of its results under Mr. Hill's management; one of which results was that *suicide altogether disappeared* in that institution; nor has one single instance occurred since the abolition of restraint up to the present time, I believe.

2. In the attacks which were made upon the system, in the *Lancet* principally, by different opponents, it is denominated "Hill's system;" and Dr. Charlesworth repeatedly assisted Mr. Hill in defending his claim to it, but never once put in a rival claim for himself.

3. On the contrary, Dr. Charlesworth declared to Dr. Granville that he was the greatest friend of the system, as well as of the originator of it. And he likewise told the humble individual who now addresses you, that the entire absence of restraint which I then witnessed in Lincoln Asylum was owing to the indefatigable labours of Mr. Hill, who had, as Dr. Charlesworth expressed himself on another occasion, "conceived and *effected results* honourable to himself, and *beyond the hopes of the Board*." And still more recently at Hull, that "the real honour of introducing the system was due to Mr. Hill."

One more testimony of Dr. Charlesworth, and I have done.

Extract from the *Physicians' Journal*, 1841, January 3rd.—"The bold position taken by Mr. Hill in his publication on the non-restraint system, assuming the practicability of a total abolition of instrumental restraint, *was not less sensible than sound*. The present house-surgeon has taken a similar position as regards the abolition of solitary confinement, and I trust he will succeed in his object, *as Mr. Hill has done in his own!*"

"Signed, E. P. CHARLESWORTH."

Mr. Pierce might just as well say that Dr. Charlesworth was the author of the abolition of "*solitary confinement*," as of the "total abolition of instrumental restraint;" both statements being equally repugnant to historic testimony.

I am in possession of abundance of evidence on this subject, and am prepared to

shew that Mr. R. Gardiner Hill did not merely make a "guess," as Mr. Pierce *now*, in direct contradiction both of himself and Dr. Charlesworth, asserts; but that he practically demonstrated the soundness of his theory by his verification of it:—that, as Dr. Charlesworth states, "*he succeeded in his object*;"—and that for some time Lincoln was the only Asylum in the world, where restraint was altogether, and on principle, dispensed with—and this at the suggestion, and under the management, of Mr. R. Gardiner Hill, as house-surgeon. "The practice of restraint and coercion has disappeared *under his management*." (Dr. Charlesworth).

"Fiat justitia, ruat cælum." When, in consequence of Mr. Pierce's assertion that Dr. Charlesworth was the originator of non-restraint, (by which term I mean not a mere mitigation, but an entire abolition of it), I publicly challenged Dr. Charlesworth to come forward, and if he were the author of the system to avow it openly and manfully, Mr. Pierce, not being able to answer my arguments, replied that my challenge was "rude and unbecoming;" Dr. Charlesworth, knowing that he was *not* the author, and that he had both publicly and privately declared that he was not, but that Mr. Hill was, yet not having the "generosity" to repeat his public disclaimer,—*remained silent*.

Let it be remembered that in 1837 Mr. Pierce attested that the author of the bold conception was Mr. Hill, who had not merely made a lucky guess, but even at that early period from the date of his appointment had "made a striking advance towards verifying his opinion." The same Mr. Pierce, who, it would appear, has not the proverbial advantage of a good memory, now says that Dr. Charlesworth as emphatically declared at Hull that he was not. Those whom Mr. Pierce describes as the "members of a very shrewd profession," will easily discriminate for themselves where the truth lies.

But they, and the public, have already pronounced sentence. For not only was the controversy triumphantly decided in the *Lancet* in Mr. Hill's favour, but a testimonial is about to be presented to that gentleman as the author and originator of non-restraint—a testimonial valuable, not only on account of its intrinsic worth, but far more, as the expression of the sentiments of men who are competent judges of evidence, and whose names are above all suspicion of intrigue or "professional jealousy."—I have the honour to be, sir,

Your faithful servant,

JOHN DANIEL,

Incumbent of East Ardsley, near Wakefield
East Ardsley Parsonage, October 14, 1851.

Medical Intelligence.

UNIVERSITY OF LONDON.

SECOND EXAMINATION FOR THE DEGREE OF BACHELOR OF MEDICINE.

Monday, November 3.—Morning, 10 to 1.

Physiology.

Examiner, Prof. CARPENTER.

1. Give a general account of the history of the Development of the *Human Teeth*, both of the temporary and permanent series; point out the analogies between its successive stages and the modes of dentition of the lower Vertebrata; and describe the organic structure and chemical composition of the Dentine, Enamel, and Cementum.

2. Describe the principal forms under which the *Liver* and the *Pancreas* present themselves in the Animal series; and state what, according to recent investigations, may be considered as their respective offices in the operations of Digestion and Assimilation.

3. Describe the movements of the *Alimentary Canal* in Man, from its commencement to its termination; and point out how far these are dependent on the Nervous System, or are influenced by it, and how far the Mind participates in them.

4. Describe the structure, chemical composition, properties, and mode of development and repair, of the *White* and *Yellow Fibrous Tissues*; and give an account of their general distribution in the Human Body, and of the functions to which they are respectively subservient.

5. Enumerate the actions of the different Muscles of the *Human Larynx*, and show how these are employed in the production of Vocal Sounds, and in the regulation of the respiratory movements; and state what are the respective functions of the nerves by which they are all supplied, as determined by the results of their section.

6. Describe the typical plans of the *Circulation* in the Fish and in the Reptile, the mode in which the one is transformed into the other in the metamorphosis of the Batrachia, and the transitional forms which remain permanent in the Perennibranchiate family; and state how far any analogous conditions are presented during the embryonic development of Man.

Afternoon, 3 to 6.

General Pathology, General Therapeutics, and Hygiene.

Celsus de re Medica.

Examiners, Dr. BILLING and Dr. TWEEDIE.

1. Define what is generally understood

by the term Atrophy. Explain the circumstances under which atrophy of organs may take place, giving examples in illustration.

2. Enumerate the principal remedies employed as diuretics. Explain the theory of their operation, and how their selection in particular diseases should be determined.

3. Describe the different modes of bathing employed, either with reference to the preservation of health, or the treatment of diseases. Specify the diseases in which particular forms of baths are beneficial as curative agents, with such precautions as it may be necessary to observe in their application.

Translate the following passage into English:—

Si cui verò dolere nervi solent, quod in podagrâ chiragrâve esse consuevit, huic, quantum fieri potest, exercendum id est quod affectum est, objiciendumque labori et frigori: nisi quum dolor increvit, sub quo quies optima est. Venus semper inimica est. Concoctio, sicut in omnibus corporis affectibus, necessaria: cruditas enim id maximè lædit, et quoties offensum corpus est, vitiosa pars maximè sentit. Ut concoctio autem omnibus vitiis occurrit, sic rursus aliis frigus, aliis calor: quæ sequi quisque pro habitu corporis sui debet. Frigus inimicum est seni, tenui, vulneri, præcordiis, intestinis, vesicæ, auribus, coxis, scapulis, naturalibus, ossibus, dentibus, nervis, vulvæ, cerebro. Idem summam cutem facit pallidam, aridam, duram, nigram: ex hoc horrores tremoresque nascuntur. At prodest juvenibus, et omnibus plenis: erectiorque mens est, et melius concoquitur, ubi frigus quidem est, sed cavetur. Aqua verò frigida infusa, præterquam capiti, etiam stomacho prodest: item articulis doloribusque qui sunt sine ulceribus: item rubicundis nimis hominibus, si dolore vacant. Calor autem adjuvat omnia quæ frigus infestat; item lippientes, si nec dolor nec lacrymæ sunt; nervos quoque qui contrahuntur, præcipuèque ea ulcera quæ ex frigore sunt. Idem corporis colorem bonum facit, urinam movet. Si nimius est, corpus effeminat, nervos emollit, stomachum solvit. Minimè verò aut frigus aut calor tuta sunt ubi subita insuetis sunt: nam frigus lateris dolores, aliaque vitia; frigida aqua strumas excitat. Calor concoctionem prohibet, somnum aufert, sudore digerit, obnoxium morbis pestilentibus corpus efficit.

Tuesday, Nov. 4.—Morning, 10 to 1.

Surgery.

Examiners, Sir STEPHEN HAMMICK and Mr. HODGSON.

1. What is an ulcer? Describe the

processes by which ulcers are formed and repaired. Give the names and classification of those ulcers which are found on the surface of the body; describe the appearances and symptoms which enable you to discriminate between the different varieties; write down the mode of treatment to be pursued, both locally and constitutionally, of each, whether in a simple or aggravated form. You need not enter on the management of such as are of a syphilitic or cancerous nature.

2. What are the symptoms and appearances attending a fracture of the skull which requires the operation of the trephine, either immediately after the receipt of the injury, or at any subsequent period? Give the method of performing the operation, with the local and general treatment of the patient up to a favourable or fatal issue.

3. Describe the process of ossification by which the union of a simple or compound fracture of a cylindrical bone is accomplished. State the various causes which may not only retard, but finally prevent the union, for instance, of a simple fracture of a thigh-bone, about its middle third. Enumerate the different modes of treatment which are employed for the cure of ununited fractures.

Afternoon, 3 to 6.

Medicine.

Examiners, Dr. BILLING and Dr. TWEEDIE.

1. Describe the morbid breath sounds, their physical causes and pathological significations.

2. Describe the pathological causes and treatment of ileus. When invagination of a portion of intestine has taken place, explain the process by which the continuity of the canal is occasionally restored.

3. Sketch the diagnostic symptoms (general and physical) of inflammation as it occurs in the different tissues of the lung.

4. Describe the different forms, complications, and treatment of rheumatism.

5. Sketch the differential diagnosis of arachnitis, delirium tremens, febrile delirium, and mania.

6. Describe the symptoms and treatment of the different forms of angina (inflammation of the throat).

Wednesday, Nov. 5.—Morning, 10 to 1.

Midwifery.

Examiner, Dr. RIGBY.

1. Enumerate the signs of the child's death before and during labour.

2. What is the treatment of labour where the funis presents?

3. Describe the treatment of hæmorrhage arising from uncontracted uterus after labour.

4. Give the diagnosis between retroversion (during pregnancy), inversion, polypus and prolapsus uteri.

Afternoon, 3 to 6.

Forensic Medicine.

Examiners, Prof. BRANDE, Dr. PEREIRA, and Dr. RIGBY.

1. What are the chemical peculiarities of the colouring matter of the blood? and how are stains of blood upon linen and upon woollen clothing to be distinguished from those of red paint and of other colouring matters?

2. What are the uses of arsenious acid in the arts, and of what substitutes does it admit? What inconvenience would ensue from the entire prohibition of its sale? If necessary that the public should have access to it, under what restrictions should it be furnished?

3. Describe the symptoms and treatment of poisoning by hydrocyanic acid.

4. Describe the symptoms and treatment of arsenical poisoning, both acute and chronic.

5. A young unmarried woman, whose respectability is unquestioned, has a considerable abdominal enlargement, which has been gradually increasing for some months: it is uniformly firm and elastic. What points of diagnosis would you endeavour to decide upon before having recourse to examination per vaginam?

6. What are the evidences during life that a female has been pregnant?

First Division.

Duthoit, Thomas James, St. Bartholomew's.

Griffith, Samuel, King's College.

Head, Edward A. H., King's College.

Jackson, Edward, University College.

May, George, King's College.

Monckton, David Henry, King's College.

Neale, Richard, University College.

Odling, William, Guy's Hospital.

Reynolds, John Russell, University College.

Steele, William Palmer, King's College.

Stocker, John Sherwood, Guy's Hospital.

Thompson, Henry, University College.

Second Division.

Beale, Lionel Smith, King's College.

Burchell, Peter L., Westminster Hospital.

Courtenay, R. H., Richmond Hos., Dublin.

Hunt, Richard, Guy's Hospital.

Keyworth, John W., St. Thomas's Hospital.

Lakin, James Henry, King's College.

Vaux, James, King's College.

THE EPIDEMIOLOGICAL SOCIETY: ITS VIEWS AND OBJECTS. BY J. O. M'WILLIAM, M.D., R.N., F.R.S.

WHETHER we look back into the past history of those pestilences by which, in former times, England has been visited, or more immediately realise the extensive and fatal prevalence of epidemic diseases during late years, we cannot but be surprised that an Epidemiological Society in this country is only of to-day's creation.

Without, however, dwelling on the past, I would observe as regards the future, that a society especially devoted to the investigation of epidemic diseases, if properly supported and efficiently managed, cannot fail to exert a marked and beneficial influence on the right direction of such measures as may be adopted for the promotion of public health.

That the class of diseases included in the general term "epidemic" demands a distinct and systematic inquiry, conducted in a comprehensive and philosophic spirit, is a proposition that hardly needs being urged at the present day. If, however, any argument for the necessity of such an investigation were wanting, it is to be found in the emphatic statements which appear in the remarks introductory to the "objects" of the Epidemiological Society, when we find that "the yearly average number of deaths in England alone from zymotic affections, in the five years 1838—1842, amounted to 67,345, or 19 per cent. of the total annual mortality from all specific causes; whilst, as far as London is concerned, the deaths from zymotic diseases in 1848 amounted (exclusively of the cholera deaths in that year) to 17,634—a number exceeding by 3033 the total deaths in the metropolis from cholera during the whole of the late epidemic."

As having an immediate and forcible bearing on this important question, I cannot do better than advert to the striking and instructive results of Professor Christison's elaborate examination of the deaths among the assured of the Standard Life Assurance Office, during the last five years. I cannot too earnestly direct the attention of my readers to the statements of the distinguished Edinburgh professor, feeling assured that they are not mere suppositions or vague speculations, but the legitimate conclusions of a cautious and patient investigation into a large assemblage of well-ascertained facts:—

"The next head, 'Deaths from Fever, Malignant Cholera, Scarlet Fever, and other Epidemic and Infectious Diseases,' said the learned professor, "is a numerous one in this list; because, as every one knows, Scotland and Ireland in particular

have been visited during the last five years by a severe epidemic of cholera, and a much worse one of typhus fever. Of 291 deaths, no fewer than 67 have died from diseases of this class, and 55 of them from typhus and cholera alone. These 55 may be considered in a great measure as an extra loss; for, in all probability, proper sanitary measures would have prevented them. This is a very important matter for the consideration of all assurance companies; for, contrary to what has been thought by many, typhus and cholera do not seem, as in all epidemics, to attack chiefly the feeble and unsound, so as merely to cut off a little sooner those who would perish at any rate at no distant period by ordinary diseases at large:—no less than 17 out of 20 deaths from cholera, and nearly the same proportion among those from fever, have occurred among what would undoubtedly be considered by every one as select lives. Another serious consideration is, that most deaths from these causes occur early in life, and consequently, in general, very soon after assurance is effected."

Hence it is but too evident that the destructive course of epidemic and infectious diseases in this country is one onward and certain, not only as observed in the occasional sweeping and desolating march of cholera or influenza, but also in the constant, although comparatively silent, yet far more fatal progress of other diseases, of which the public in general hear but little.

When Professor Christison brought forward his important facts at the late general meeting of the Standard Office, it was well observed by one of the directors that "without the valuable aid of the medical officers no office could succeed;" and that "unless they did their duty well and faithfully, life assurance would be a most precarious business." Another gentleman, on the same occasion, alluding to the statistical results of Dr. Christison, said—"When we find that so large a proportion as 20 per cent. of the deaths arise from epidemic disease, I think it behoves us to give increased attention to sanitary subjects for the future; because we may be certain that the greater the progress made in that direction, the more favourable will be the results of life assurance."

These observations are full of practical wisdom. They bespeak an enlarged and proper view of the value of medical science as an element in the system of life assurance—a view that does not limit the usefulness of the medical officer to the mere selection of eligible lives, but which also recognises in well-directed sanitary legislation a means of mitigating, if not of obviating, those evils which are constantly operating to the destruction of human life.

The objects which the Epidemiological Society have in view are briefly but comprehensively stated in the following passage of Dr. Babington's eloquent introductory address at the opening meeting of the Society in December last:—"To endeavour," said Dr. Babington, "by the light of modern science, to review all those causes which result in the manifestation and spread of epidemic diseases; to discover the cause at present unknown, and investigate those which are at present ill understood; to collect together facts on which scientific researches may be securely based; to remove errors which impede their progress; and thus, as far as we are able, having made ourselves acquainted with the strongholds of our enemies, and their modes of attack, to suggest those means by which their invasion may either be prevented, or, if in spite of our resistance they have broken in upon us, to seek how they may be most effectually combated and expelled."

Four committees of this Society are already actively engaged in investigating the following important subjects:—

1. The facts connected with small-pox and vaccination.
2. The condition of common lodging-houses as influencing the propagation and spread of epidemic diseases.
3. The epidemic diseases prevalent in public hospitals.
4. Epizootic diseases, more especially those affecting domestic animals.

It is upon such grounds, and with the possession of such claims, that I venture to bring the Epidemiological Society under the notice of the readers of this magazine, more especially of those interested in life assurance; and earnestly recommend its beneficent objects to their attention and cordial support.

KING'S COLLEGE HOSPITAL.

ON Friday last, a meeting was held in the board-room of the above institution, in Portugal Street, Lincoln's-inn-fields. From the report it appeared that up to the close of the last year no less than 175,711 patients had participated in the benefits of the hospital since its opening, and during the first nine months of the present year nearly 20,000 in- and out-door recipients had been treated. It was stated that the receipts had fallen far short of the requirements of the institution—the committee having no funds in hand to meet the last half-year's liabilities. A hope having been expressed that the affluent would afford their much needed co-operation, the usual routine business was disposed of, and the meeting separated.

RETURN OF THE BIRTHS, DEATHS, AND MOVEMENT OF THE POPULATION OF THE BOROUGH OF PLYMOUTH, DURING THE QUARTER WHICH ENDED ON THE 30TH OF SEPTEMBER, 1851. BY DR. W. HAMILTON.

DR. W. HAMILTON, of Plymouth, has forwarded to us the subjoined interesting medical statistics regarding the borough in which he resides. It is to be regretted that his example is not more extensively followed by medical practitioners.

| | 1850. | | | 1851. | | |
|---------|-------|------|------|-------|------|------|
| | Bir. | Dea. | Dif. | Bir. | Dea. | Dif. |
| July . | 133 | 67 | 66 | 127 | 89 | 38 |
| Aug. . | 133 | 84 | 49 | 135 | 76 | 59 |
| Sept. . | 142 | 103 | 39 | 153 | 104 | 49 |
| Sum . | 408 | 254 | 154 | 415 | 269 | 146 |
| Mean . | 136 | 85 | 51 | 138 | 89 | 49 |

Movement of the population during the quarter.

March 31, ashore 49,673
in port 1,014
at sea 1,536

April 1, 1851. 52,223
Increase in June quarter 136

1st July, 1851. 52,359
Increase in July 38
August 59
September 49

Total, 1st October 52,503

From this table we learn that the population of the borough has at length begun to rally after the severe shock it sustained from the invasion of cholera in 1849; but, in consequence of the introduction of a new and highly important element, hitherto unhappily neglected, into the enumeration of the present year, no comparison can be correctly made with past years. We therefore have assumed the numbers given by the Registrar-General in his last report, as a fresh starting-point, distinguishing the different classes to which the enumeration of last March applies.

In order to compare the salubrity of Plymouth with six other towns, we have extracted from the reports of the Registrar-General the particulars contained in the following tables for each of the 10 years ended on the 31st of December in each.

TABLE I.

Mortality of each of the undermentioned towns for the 10 years ended 31st December in each year.

| | Liverpool. | Manchester | Birmingham. | Bristol. | Stoke and Stonehouse. | Plymouth. | Exeter. |
|--------|------------|------------|-------------|----------|-----------------------|-----------|---------|
| 1841 | 7,556 | 5,821 | 3,672 | 1,895 | 955 | 730 | 920 |
| 1842 | 7,400 | 6,139 | 3,578 | 1,771 | 1,407 | 1,141 | 764 |
| 1843 | 7,455 | 6,263 | 3,342 | 1,735 | 1,015 | 889 | 635 |
| 1844 | 7,625 | 5,892 | 3,885 | 1,846 | 1,080 | 1,014 | 802 |
| 1845 | 7,371 | 6,022 | 3,604 | 1,692 | 1,043 | 857 | 736 |
| 1846 | 9,707 | 7,809 | 4,684 | 1,666 | 1,158 | 963 | 841 |
| 1847 | 17,284 | 9,517 | 5,404 | 1,809 | 1,279 | 944 | 826 |
| 1848 | 10,435 | 7,256 | 4,658 | 1,993 | 1,432 | 1,284 | 646 |
| 1849 | 12,946 | 8,213 | 3,912 | 1,815 | 2,095 | 2,003 | 797 |
| 1850 | 7,505 | 6,680 | 4,056 | 1,850 | 1,137 | 1,188 | 702 |
| Sum . | 95,284 | 69,612 | 40,825 | 18,072 | 12,601 | 11,013 | 7,669 |
| Mean . | 9,528.4 | 6,961.2 | 4,082.5 | 1,807.2 | 1,260.1 | 1,101.3 | 766.9 |

TABLE II.

Comparative view of the population and mean mortality of the undermentioned towns, with the centesimal proportion between the mean decennial mortality and the population in 1851, and mean decennial population.

| Population of the undermentioned towns according to the enumerations of— | | | Mean Annual Population. | Mean Annual Mortality for 10 years. | Centesimal proportion of mean mortality as measured by the actual population of 1851 and the mean population. | |
|--|---------|---------|-------------------------|-------------------------------------|---|-------------------|
| | 1841. | 1851. | | | 1851. | Mean of 10 years. |
| Liverpool . . . | 223,003 | 255,055 | 239,029 | 9,528.4 | 3.74 | 3.99 |
| Manchester . . . | 192,403 | 228,437 | 210,420 | 6,961.2 | 3.05 | 3.31 |
| Birmingham . . | 138,215 | 173,878 | 156,046 | 4,082.5 | 2.35 | 2.62 |
| Bristol | 64,266 | 65,781 | 65,023 | 1,807.2 | 2.75 | 2.78 |
| Stoke & Stonehouse | 43,502 | 50,153 | 46,827 | 1,260.1 | 2.51 | 2.69 |
| Exeter | 31,312 | 32,810 | 32,061 | 766.9 | 2.34 | 2.39 |
| Plymouth | 36,520 | 52,223 | 44,371 | 1,101.3 | 2.11 | 2.48 |

From this table it will be seen that, notwithstanding the smaller amount of the mean annual population of Plymouth, as compared with that of Stoke and Stonehouse, the centesimal mortality of the former fell short by 0.21, or nearly one quarter per cent. of that of the latter, and only exceeded that of Exeter, where sanitary improvement has been carried out so admirably, by 0.09 per cent., while it was above 1.5 per cent. below that of Liverpool, 0.83, or nearly 1 per cent. below that of Manchester, 0.14 per cent. below that of Birmingham, and 0.30 per cent. below that of Bristol.

MEDICAL APPOINTMENT.—ESSEX LUNATIC ASYLUMS.

DR. MILLER, of Chelmsford, has been

appointed Inspecting Physician of the Lunatic Asylums of the County of Essex, in place of the late Dr. J. C. Badeley, deceased.

UNIVERSITY COLLEGE HOSPITAL.

THE Court of Assistants of the Grocers Company, on the 5th inst., voted the sum of 50*l.* in aid of the funds of this charity.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 6th November, 1851:—
James Cornish Crossing, Devonport —
William Adams, St. Austell, Cornwall.

Selections from Journals.

CASE OF POISONING BY SULPHURETTED HYDROGEN GAS. BY THEODORE S. BELL, M.D., LOUISVILLE., KY.

ON Tuesday the 22d of April, Mr. Hugh Ferguson, an old and highly respected citizen of Louisville, and a German labourer in his employment, were severely poisoned by sulphuretted hydrogen gas; and as the subject is one of some interest, both in the deadly character of the poisonous agent, and the infrequency of poisoning from it, I purpose to give the details of Mr. Ferguson's case, the one in which I was employed.

On the 22d of April, the German labourer referred to above had finished a pit alongside of an old privy pit, and his object was to empty the old pit into the new one. He had made two scaffolds in the pit, one about eight feet from the ground, the other about three feet. After tapping the wall of the old pit, the labourer threw into it twelve buckets of water, in order to increase the fluidity of the mass, so as to make it run easily. This, however, increased the pressure, and forced out the sulphuretted hydrogen gas. About 6 o'clock, Messrs. Ferguson and Atkinson being present, the labourer descended to the lower platform in the new pit, in order to be sure that his work was accomplished. Soon after reaching the platform, he was so overpowered by the deadly gas, that he sank down, without being able to make any outcry. Mr. Ferguson thought the man had fainted, and remarked that he was too old and feeble to go down into the pit, but added, that he could not see the poor fellow in that situation without giving him assistance. He accordingly descended, unsuspecting of the noxious agent he was about to meet. Mr. Atkinson also partially descended the ladder, but Mr. Ferguson turned deadly sick, and attempted to get back to the ladder. Mr. Atkinson reached out his hand to assist him, but the overpowering gas had performed its work too effectually, and Mr. Ferguson fell, and drew Mr. Atkinson into the pit. The latter had presence of mind enough to hold his breath, managed to climb the ladder, and was thus able to give the alarm. If Mr. A. had not escaped, all three of the victims must have died, because their condition would have been unknown probably for hours.

Ropes were procured from a neighbouring pump-maker, and after a great loss of time the two men were caught by the hooks, and drawn up to the ground apparently dead. I reached the place soon after the sufferers were drawn out. I found the case in the

hands of Dr. Lisle, and joined him in the treatment. The case presented a group of symptoms, in which I saw no gleam of hope. The entire surface of the body was cold, and apparently dead: the breathing, if the spasmodic attempts after air that were made by the sufferer can properly be called breathing, seemed to carry no air to the lungs. Mustard had been applied, but it produced no effect, and ammonia to the nose gave no sign of its presence. It would be difficult to exaggerate the gravity of the symptoms. The skin was universally cold, as cold as death itself could make it; the spasmodic attempts to get air, already described; a pulse sometimes manifesting itself in a feeble flutter, and at other times altogether absent; and this state of things, persisted in fully for three hours, and to a considerable extent for six hours, constituted one of the most serious forms of imminent danger I have ever seen.

Immediately after the men were drawn from the pit, they were taken to a porch in the street for the purpose of giving them fresh air. When I reached the patient, an immense crowd was in the street and porch, and all over the steps of the latter, and it was difficult to secure the sufferers a supply of air. The mustard which had been applied to the skin produced no effect, and we determined to remove our patient to a neighbouring house. Numbers of persons in the vicinity offered their houses, and all that might be needed for the use of the sufferers, and the contest seemed to be who should have both the victims. We conveyed Mr. Ferguson to the house of Mr. Atkinson, and the German was taken to the opposite house—Jas. I. Lemon's.

The most urgent demand in Mr. Ferguson's case was the removal of his wet clothes, in order to have the benefit of a warm dry bed; and after that was secured, all our means were directed to the relief of the asphyxia. Spasms now supervened, and very severe for some time. We decided on external applications of heat, mustard sinapism, Granville's lotion to the back, and injections, per rectum, of brandy, and in one of them we used a teaspoonful of chloroform in combination with the brandy. About this time Dr. Lewis Rogers joined Dr. Lisle and myself in the case.

From the first of the case, I was apprehensive of apoplexy, and as the patient emerged from the asphyxia, a stertorous breathing, a more profound coma than there should have been when the asphyxia was passing off, the condition of the pupils, and rigidity of the muscles of the jaw, all indicated that our worst apprehensions were about to be realised. But we were prepared, and the approaching danger was as promptly and vigorously met as the circumstances

of the patient would warrant. Nothing was done at hap-hazard, and we patiently bided our time. As the re-action began, cold applications were made to the head; when these failed, we resorted to leeches; and when they failed in doing all we hoped for from their use, we administered three drops of croton oil, applied blisters to the ankles, wrists and back, and finally opened a vein in the arm, and drew off a quantity of the blackest blood I ever saw.

Between 1 and 2 o'clock, A.M. we retired from the house, determining among ourselves that we would wait several hours for the effect of the active treatment our patient had undergone. The arrangement was that I should return to the case at 4 o'clock. I slept two hours, and then visited the patient again, and found our most sanguine hopes realized. The breathing was calm, the pulse full and well sustained, the extremities warm, and while I was in the room the patient spake for the first time. The apoplectic symptoms were entirely gone; the croton oil had acted well, the blisters drew admirably, and in the course of the morning a distressing strangury manifested itself, but it was relieved by sprinkling powdered camphor on one of the blisters, and by the use of demulcent drinks. We enjoined rest, and in the afternoon the patient was removed to the house of one of his daughters.

Throughout the asphyxia I noticed that the left side was much more lifeless than the right, and the blisters on the right ankle and wrist proved to be much sorer and deeper than those of the left ankle and wrist.

These are the main features of this interesting case. From the point where I drop the details there was no occurrence that demands any special notice. The patient rapidly recovered, and on Friday was able to walk about. As in cases of concussion of the brain, in this there is a complete obliteration of all memory of the matters immediately preceding the disaster. Mr. Ferguson is unable to remember that he was about the pit, and can recollect nothing of the descent and fall of the German labourer. But in all other respects his mind and his memory are as perfect as ever they were.—*Boston Medical Journal* for July, 1851.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Nov. 8.

| BIRTHS. | DEATHS. |
|---------------|---------------|
| Males.... 770 | Males.... 484 |
| Females.. 710 | Females.. 505 |
| 1480 | 989 |

CAUSES OF DEATH.

| | |
|--|-----|
| ALL CAUSES | 989 |
| SPECIFIED CAUSES | 980 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 242 |
| <i>Sporadic Diseases, viz.—</i> | |
| 1. Dropsy, Cancer, &c. | 40 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 115 |
| 4. Heart and Bloodvessels..... | 40 |
| 5. Lungs and organs of Respiration | 148 |
| 6. Stomach, Liver, &c. | 63 |
| 7. Diseases of the Kidneys, &c. | 11 |
| 8. Childbirth, Diseases of Uterus, &c. | 9 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 8 |
| 10. Skin..... | 1 |
| 11. Premature Birth..... | 26 |
| 12. Old Age | 33 |
| 13. Sudden Deaths..... | 8 |
| 14. Violence, Privation, Cold, &c.... | 40 |

The following is a selection of the numbers of Deaths from the most important special causes:

| | | | |
|--------------------|----|------------------|-----|
| Small-pox..... | 25 | Convulsions..... | 41 |
| Measles..... | 12 | Bronchitis | 40 |
| Scarlatina | 59 | Pneumonia | 76 |
| Hooping-cough | 17 | Phthisis | 125 |
| Diarrhoea..... | 28 | Lungs | 7 |
| Cholera..... | 1 | Teething | 2 |
| Typhus..... | 56 | Stomach | 6 |
| Dropsy | 17 | Liver..... | 12 |
| Hydrocephalus | 24 | Childbirth | 5 |
| Apoplexy | 30 | Uterus | 3 |
| Paralysis | 22 | | |

REMARKS.—The total number of deaths was 23 *above* the average mortality of the 45th week of ten previous years.

METEOROLOGICAL SUMMARY.

| | |
|--|-------|
| Mean Height of the Barometer | 29.68 |
| Thermometer ^a | 40° |
| Self-registering do. ^b Max. 0.0 Min. 20° | |

^a From 12 observations daily. ^b Sun.

RAIN, in inches, '17. — Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was nearly 2° *below* the mean of the month.

NOTICES TO CORRESPONDENTS.

G. E. S., Nottingham. — We agree with our correspondent that the species of esoteric quackery to which he alludes is a disgrace to the profession. We shall at all times be ready to expose it when cases come before us in an authentic form.

Dr. Inman's interesting pathological communication will have early insertion.

Speculum Practice.—We have received several letters on this subject. One of these will be published in the following number.

Mr. J. Stansbury.—We do not concern ourselves with the reform of the Law of Marriage, and have therefore no answer to make to the application.

We are obliged to two correspondents for the corrected proofs of the Proceedings of the Pathological Society, but we are compelled to defer their insertion until next week.

Mr. William Cooper's letter in reference to the Norwich case is under consideration. It reached us too late for the current number.

Lectures.

CLINICAL LECTURE
ON CASES OF
CHRONIC BRONCHITIS AND
EMPHYSEMA.

(Delivered at King's College Hospital. Nov. 1850.)

By R. B. TODD, M.D. F.R.S.
Physician to the Hospital.

[Reported by LIONEL J. BEALE, M.B., Medical Associate of King's College, London.]

LECT. XXVI.

Two cases of chronic bronchitis—Influence of cold in producing bronchitis—signs of bronchitis—Prolonged expiration—Changes which frequent attacks of bronchitis occasion in the lung—How these changes are caused—Emphysema caused by bronchitis—Other causes of it—Alterations in the form of the chest, and in the respiratory movements in emphysema—Second case an example of incipient emphysema—Chronic irritable cough—Question of tubercular deposits—Remarks on treatment—Is emphysema curable?

GENTLEMEN,—There are at present in Rose Ward two cases of chronic bronchitis, accompanied with more or less of that condition of lung to which the name of Emphysema has been applied. Both these cases are good examples of chronic bronchitis, and each exhibits the effect of this disease upon the lungs when the patient has been the subject of many attacks, and when he has had the disease for a short period.

The first case is that of a baker of the name of Dawson, æt. 48,—a man, like many of his trade, of intemperate habits; frequently exposed to vicissitudes of temperature.

There is no disease of the lungs so strikingly influenced by changes of temperature as chronic bronchitis. The inhabitants of countries where the climates are uniformly mild are not subject to it; and I am informed that those who live in a clear, cold atmosphere, which preserves its temperature with little or no variation, are seldom affected by it. Thus a Canadian winter, cold though it be, is not favourable to the production of bronchitis. An uncertain, changeable climate, like that of England, is that which seems to be peculiarly favourable to the development of this disease. Such is our variableness of temperature, that we have the disease in summer as well as in winter; but it is during the latter season,

when the temperature is at its lowest, that we meet with the most numerous examples of it. Many persons are thus afflicted at the commencement of each successive winter, and get what is called a winter cough, which either leaves them, or becomes greatly relieved, when the more genial weather of spring or summer arrives. They continue well during the warm season, but the bronchitis and the cough again return with the return of cold weather. At this time of year* bronchitis is beginning to be prevalent, and, as the winter advances, it will become more so. You may have observed that within the last few days several cases of it have been admitted. A fall in the temperature is always attended with an increase in the number of cases, as you may observe more strikingly if you watch the out-patients.

After a patient has had repeated attacks of this kind in the winter, the cough becomes habitual with him, and, although it will be much less in the summer than in the winter, it will never leave him completely. Such has been and is the case with our patient Dawson: he has been subject to winter cough for the last ten years. For the first part of this period it was confined to the winter, but latterly he has had it all through the year. With the cough there is always more or less of dyspnœa, which is aggravated by various, and even by slight causes. A full meal, or any indigestible constituent of a meal, whether full or spare, are among the most frequent of the causes liable to excite a paroxysm of dyspnœa. Very often persons subject to these frequent attacks of bronchitis and winter cough become asthmatic, or, in other words, liable to severe attacks of dyspnœa. Under the influence of various causes, these paroxysms very commonly occur at night; one of the most frequent of these causes being, that the patient is apt to go to bed shortly after a meal, and while the stomach is yet digesting. The continuance of the cough, the constant dyspnœa, and its occasional aggravation into a paroxysm of asthma, cause new symptoms to show themselves as the case advances, and give rise to certain physical changes in the lungs themselves.

If we listen to the chest of a person affected with bronchitis for the first time, we hear rhonchus and sibilus, accompanied with more or less crepitation, which varies in quantity and quality with the quantity and quality of the secretion in the bronchial tubes. Thus, if the secretion be moist and mucilaginous, we shall hear large crepitation; while, on the other hand, if it be viscid, the crepitation will be small in cha-

* This lecture was delivered in the month of November.

racter. These signs, of course, will be heard in those parts of the lung which are chiefly affected by the bronchitis; but one of the features of bronchitis is its readiness to affect both lungs, and to affect them very extensively, so that these sounds may sometimes be heard all over one or even both lungs. In this respect bronchitis contrasts strikingly with pneumonia, for this latter disease will generally attack only part of one lung, and when it does attack two lungs, it will affect only a small portion of each.

You will find such a case as that of Dawson very useful for familiarizing your hearing with the sounds I have mentioned. When you make him inspire, you hear rhonchus, and as the air advances into the bronchial tube, you get sibilus, and then crepitation. The rhonchus is heard in the larger tubes, the sibilus in those somewhat smaller, and the crepitation in the smallest tubes. In some parts you may hear the bronchial sounds only; and beyond them, when the patient inspires deeply, you get the soft rustling sound of the expansion of the terminal tubes or air-cells—the true vesicular breathing. In such parts of the lung the viscid secretion has not been formed in the vesicular structure, and the morbid change is as yet confined to the tubes leading to it.

In a first attack of bronchitis, the lungs are not altered in structure, or the chest in form; but after repeated attacks, both are affected in a manner which I shall presently describe to you.

It is remarkable that in these cases we always find that the expiratory sound is more or less prolonged; in some instances a long and somewhat harsh wheeze forms the sound of expiration, which at times is as long and even longer than the inspiratory sound.

In the normal state of respiration you know that the chief sound is that caused by the ingress of air into the lungs, or the inspiratory sound, and that the sound of expiration is so slight that it is scarcely appreciable, and, indeed, in most instances is inaudible. This is doubtless owing chiefly to the extreme rapidity with which the lung, by its elastic reaction, expels the air; and partly, perhaps, it may be due to the great softness of the pulmonary tissue, which makes it an imperfect conductor of sound. When, however, the bronchial membrane is thickened by inflammation, and the tubes narrowed by the same cause, and their canals impeded by mucus, the air passes out of the lung with difficulty, in consequence of the obstacle to its exit which it thus meets with. Moreover, the pulmonary tissue around the tubes is increased in density, and becomes, in virtue of that increase, a better conductor of sound, so that not only is the exit of the air from the lung much

retarded, but its outward passage is rendered much more audible.

Such are the changes and physical signs which we find in the early attacks of bronchitis. But when there have been repeated attacks of this disease—and especially where these acute attacks have supervened upon a continuous chronic bronchitic state (if I may be allowed to coin such an adjective)—the lungs undergo very serious changes, which interfere greatly with their functional integrity and activity. These changes are of various kinds: sometimes one or more bronchial tubes are obliterated (as first, I believe, pointed out by Dr. Stokes), and the pulmonary lobule or lobules to which they lead collapse from the absence of their usual distending medium, the air, and become more or less wasted. The adjacent tubes and their corresponding air-cells dilate to receive more air, just as the tubes of one lung would if the other were compressed by fluid, but probably to a much greater degree; and thus we may have in the same lung at parts a collapse and an atrophy of portions of the lung, and at other points expansion and permanent dilatation of the air-tubes and air-cells.

But there are other and more potent causes in operation to promote the dilatation of the air-cells and tubes. These are the disturbed state of breathing caused by the bronchial irritation, and more especially the difficulty of expiration, and the mischief done to the tissues of the bronchial apparatus by the repeated attacks of inflammation. Thus the bronchial irritation gives rise to a more or less asthmatic state, in which the act of inspiration is performed with considerable force, and that in a state of lung which is ill suited to resist the pressure of the in-rushing air. The muscular fibres of the bronchial tubes must, by the repeated attacks of inflammation of the mucous membrane, be more or less weakened. Now the most probable office of these fibres is to regulate the admission of air into the lung, and thereby to protect its delicate tissues against undue pressure, just as the muscular fibres of the arteries regulate the flow of blood into them, and to a certain extent antagonise the heart's force. Hence in an enfeebled state of this muscular apparatus the bronchial tubes will yield under the force of the inspired air, and become more or less dilated; and an undue quantity of air will rush in most abundantly at those parts where the muscles are weakest, and therefore afford least resistance.*

Again, when the air has accumulated in the lung, it is, with difficulty, expelled.

* Dr. T. W. Gairdner, of Edinburgh, who has published some admirable observations on the anatomy of chronic bronchitis, has assigned to the bronchial muscles a *deobstructive* function,—

There are direct obstacles to its outward passage in the altered condition of the mucous membrane of the tubes, and in the accumulation of secretion in them. Moreover, the expelling force is in great part due to the reaction of the elastic tissue, which enters largely into the formation of the bronchial tubes, and which invests the lobules of the lung. But the undue stretching to which this tissue has been subjected, not only from the forced inspiration, but from the detention of the air within the lungs, and the accumulation of mucus in the tubes, must, as the disease advances, more or less impair its elastic power, and therefore weaken the force which takes the most direct and the largest share in the process of expiration. Thus the longer the duration of the disease, and the more frequent the attacks, the more serious will be the evils which follow in its train.

You may readily gather from what I have already said what are the alterations in the lung which chronic bronchitis tends to produce. They are—first, the immediate changes, and, secondly, the remote ones. The immediate changes are those which affect the mucous membrane and muscular fibres of the bronchial tubes, as well as the tubes themselves; such as inflammation, thickening, altered secretions—perhaps even ulceration—and also more or less dilatation of the tubes. The remote changes are a still further dilatation of the tubes—a dilatation of the air-cells; and when that dilatation goes beyond a certain point, a stretching, and even a rupture of many of the bands of elastic tissue which are found in the lobules. This stretching of the bronchial passages and cells gives rise to a corresponding change in the air cells, which exercises a very marked influence upon the capillary vessels of the lung, which, so far as I know, was first pointed out by Mr. Rainey, of St. Thomas's Hospital. The expansion of the air-cells causes an extension of the meshes of the capillary network distributed upon and within them; and the rupture of many of the intersecting bands of fibrous tissue causes obliteration of their blood-vessels. Thus the capillary system of the lung becomes diminished in its capacity, and thus is explained the fact long known, that emphysematous lungs are apt to be pale, and to look as if they contained but little blood.

Now, the state to which the lung is thus

i. e. of expelling mucus or other secretion from the tubes. No doubt when mucus accumulates in any large quantity in the air-tubes, the contraction of these muscles will promote its expulsion; but this cannot be their sole, nor indeed their principal office in their ordinary state of health, when the quantity of mucus to be expelled is so extremely small. The function assigned them in the text doubtless adapts them to act as deobstruent agents when mucus accumulates.

brought by a long continuance of chronic bronchitis, is that which we call *emphysema*, in which there is more or less dilatation of a greater or less number of air-cells, and a consequent diminution in the area of the capillary system belonging to them.

Chronic bronchitis, however, is not the sole cause of emphysema, although certainly the most frequent. That state of lung will follow repeated attacks of asthma: and it may be caused by great and prolonged efforts; and there are those who believe that it may arise even in the absence of any such exciting causes, in persons who have a certain constitutional weakness of the lungs which may be inherited.

Our patient, Dawson, has been so often the subject of attacks of bronchitis, that his lungs have passed into the condition which I have described. We know this by very obvious signs: the whole chest is unusually sonorous on percussion; it sounds almost as hollow as if air were in the pleural cavity; even over the region of the heart, which is unusually dull on percussion, the percussion-sound is quite clear; the enlarged lung has come in contact with the walls of the chest, and has pushed the heart backwards into to the chest, and somewhat toward the middle line. It becomes rounded, convex in front and convex behind, forming what is called a barrel-shaped chest. The intercostal spaces appear wider than natural, there is a great interval between the ribs, and the motions of the chest become much altered. The condition of Dawson's chest has been well described by my clinical clerk, Mr. Brown, in his notes of the case,—“the intercostal spaces are much dilated, the intercostal muscles participate little in the act of respiration, which is performed principally by the diaphragm.” In extreme cases, these intercostals become almost powerless in consequence of the great amount of stretching they undergo.

If you watch Dawson as he breathes, you will perceive that his abdomen enlarges considerably at every inspiration, and that there is a general heaving of the chest; but if you look to a single intercostal space, you will perceive that the muscles are almost motionless, and that the ribs approximate but slightly to each other.

The bulging of the abdomen in inspiration is due to the descent of the diaphragm, which, at all times the most powerful muscle of inspiration, in these cases is more especially so, as it is in its vertical diameter that the chest most readily admits of expansion. The other muscles of inspiration, such as the trapezii, sterno-mastoidei, scaleni, &c. are, it is true, in active and at times even violent exercise; but from the

already enlarged state of the chest both in the transverse and antero-posterior directions, they can effect but little. Knowing the special importance of the diaphragm in such cases as these, you will understand how anything which interferes with this descent of the diaphragm will necessarily produce difficulty of breathing. Thus, a full stomach will in this manner cause dyspnoea, purely from a mechanical cause. The descent of the diaphragm is impeded, and the capacity of the chest is thus diminished. Hence patients suffering under this malady ought to be cautioned against eating a full or hearty meal—the injurious tendency of which ought to be explained to them—and they should be instructed to regulate the quantity of their food.

Another highly interesting mark of the emphysematous condition of the lungs, is to be found in the partial displacement of the heart, and in the dilatation of its right cavities. The heart is pushed towards the median plane by the enlarged left lung, and in well-marked cases it is invariably felt beating in the scrobiculus cordis, where also its sounds are best heard. I take it that this displacement and change of form of the heart is pathognomonic of emphysema of the left lung. I know of no other state capable of producing both the change of place and that of form: air or fluid in the pleural cavity may dislocate the heart, but will not cause the right ventricle to become dilated. With Dawson, you may feel the heart distinctly in the scrobiculus cordis, and there, as well as at a point midway between it and the nipple, the heart sounds are very plainly audible; but if you place the stethoscope beneath the nipple over the normal position of the apex, you will either not hear the heart at all, or you will hear it only faintly and as from a distance.

We have thus in Dawson a good example of chronic bronchitis in its most aggravated form, and of the direful consequences of that disease. His expectoration, which was at first difficult of excretion and viscid, has now become excessive, and much more liquid; it is purulent, and there is danger that if so great a discharge continue it may run him down, and he may pass into hectic, and into the condition which has been called bronchial phthisis. With a view to check this discharge I have ordered him sulphate of zinc in grain-doses three times a day, which I have often seen useful in checking this excessive bronchial secretion. At the same time he is allowed six ounces of wine daily, and a liberal diet.

The prognosis in the case is favourable as to the result of the present attack, but there can be little doubt that sooner or later he will fall a victim to this disease.

The second case of chronic bronchitis is that of a man named Gardner. You will do well to contrast the symptoms and physical condition of this man with those of Dawson. Gardner is a much younger man, being only thirty-four. The disease has been of much shorter duration, and the mischief as yet done to the lung is very slight. We can, however, observe many of the changes which I described in their aggravated form in Dawson's case, in an early stage in this patient.

It appears from the history, that it was only three years ago when he first became troubled with winter cough, which became less in summer, but did not leave him. The paroxysms were extremely violent; so much so that sometimes a fit of coughing would continue for a full hour. The chest is dilated, but to a less extent than in the case of Dawson, and there is, in a diminished degree, much the same character of movement of the chest, and the abdomen swells out at each inspiration. The heart is beginning to change its place, it is heard midway between its natural situation and the scrobiculus; vesicular breathing is quite audible, but it is accompanied by considerable roughness, and there is prolonged expiratory murmur arising from the somewhat increased density of the lung, and perhaps from a degree of thickening of the mucous membrane of the bronchial tubes. But what is most remarkable and serious in the case of Gardner, is the violent irritative cough, without proportionate expectoration. This leads me to fear that there is something more in his case than simple bronchitis, and I have repeatedly examined him with a view to find out if tubercles exist. But we can get no unequivocal proof of their presence. There is some dulness on percussion beneath the right clavicle, and some crepitation there; and on the whole there is more crepitation and roughness of breathing on the right than on the left side; the sound of the voice is a little more resonant under the right than under the left clavicle. These are unfavourable signs, and their import is rendered still more unfavourable by the fact that he has within the last few months spat blood in small quantities. He emaciates decidedly, and has profuse night sweats.

We must watch this man closely, especially with reference to any tubercular tendency. Various means and appliances have been tried for the relief to his cough, but without any decided or permanent effect—an additional ground for suspecting that some permanent irritating cause is prolonging his cough. Among other means I gave him one night an emetic of ipecacuan and zinc; it caused free vomiting, and he felt his chest freer the next day or two, but that slight improvement speedily dis-

appeared. On another occasion I made him inhale cautiously the vapour of chloroform and the steam of boiling water, but with only very temporary benefit.

I shall refer to this case again, after a longer sojourn of the patient in the hospital may have thrown more light upon the real nature of his symptoms. Meanwhile we may properly look upon it as a case of bronchitis, with incipient emphysema, of which the exciting cause remains to be discovered.

Now let me conclude this lecture with some remarks on the treatment of bronchitis and emphysema. In both the acute and chronic forms of bronchitis one of the most valuable remedies is counter-irritation. This I employ very freely in these cases, not so much by blisters as by turpentine or mustard, and there is this great advantage in this mode of counter-irritation, that you can apply it frequently and at short intervals, and moreover it is immediate in its effects, whereas a blister takes several hours to produce vesication, and it cannot be speedily reapplied. Dry cupping is also a useful form of counter-irritation, and very applicable to such cases as I have mentioned.

Generally speaking, patients labouring under bronchitis, and especially those who have had many attacks, are not very tolerant of a depleting or depressing treatment. General bleeding by venesection is, in many instances, highly dangerous; topical bleeding is borne better; when tried, only a small quantity of blood should be taken.

The medicines most applicable to these cases are those which produce a free diaphoresis, and expectorants, sometimes sedatives. When the expectoration is viscid and sticks to the tubes so as to make it difficult of dislodgement, great benefit often results from the cautious use of tartarized antimony in small doses: but this must be used only for a very short time, as it tends to produce a profuse watery expectoration, and very much to weaken the patient: as soon, therefore, as the very viscid character of the expectoration is overcome, it should be given up.

When you wish to promote expectoration without causing any undue increase in the quantity of secretion, you will find nothing better than ammonia. In bronchial catarrhs, if there be fever, it may be given freely with the liquor ammoniæ acetatis, and you thus get a copious diaphoresis also. I am also in the habit of using the chloric ether pretty freely in bronchial attacks, either alone or conjoined with ammonia. It is a valuable stimulating expectorant, and has some sedative influence likewise: if not given in too large a dose it is an agreeable medicine to take, and forms a pleasant ingredient of a cough

mixture. The decoction of the polygala senega is much lauded for its influence on bronchial affections; I have given it very freely, and, except for its unpleasant taste, can find no fault with it, nor can I bestow upon it any very strong eulogiums.

With the use of sedatives you require caution, especially with opium. Conium, hyoscyamus, hop, &c., are well borne on the whole; but nothing relieves irritable cough so effectually as opium: yet, when there is much bronchial congestion, you will beware of using it too freely, as it unquestionably tends to increase that and to endanger the life of the patient. On the other hand, when expectoration is free or too profuse, a moderate dose of opium often exercises the most beneficial influence, procures sleep, moderates expectoration, and relieves the cough. The reputation of the old pectoral elixir, modernised into compound tincture of camphor, is likely to last even through these days of scepticism.

In the more advanced stages, and especially if there be sweats (as was the case with Gardner), tonics are useful, and sometimes astringents containing tannin, or even the tannic or gallic acid. The last-named drug was used in Gardner's case, but I do not think it exercised a very marked influence in reducing the sweats. The value of the mineral acids is well known in such cases, and I have several times seen great benefit from the use of iron.

Bronchitis is much influenced in its severity and duration by *diathesis*, and therefore, in treating cases of that disease, you should keep in view the diathesis of your patient. Is he of a nervous temperament? Is he strumous or tubercular? Is he gouty? The answers to these questions ought very much to influence your practice. It must be borne in mind, too, that even the modification of general nutrition which results from the *syphilitic* taint is apt to render bronchitis obstinate in its resistance to remedies. In all the cases beware of being too antiphlogistic; in the nervous cases, especially when there is asthmatic tendency, do not let your patient get too much into the coddling system: feed him carefully—that is, give him a food easily appropriated, but always in small quantities at each time of feeding. In these cases the external use of cold water has often a good effect in bracing the system and strengthening the nerves. When the diathesis is tubercular, it is plain that reducing means are inapplicable, and that you must do all you can to build up; and it is in these cases that tonics are most applicable. When the patient is gouty, attention to diet and regimen—to hygienic means—is above all things necessary.

You will ask me, can anything be done for the emphysematous condition? Much depends upon the extent to which the disease has gone. In such a case as Dawson's, when the lung in many situations is greatly altered in its structure, the fibrous bands stretched to their utmost limits, the tubes dilated, many of the septa ruptured, the capillary plexuses altered in their arrangement, and when, perhaps, some of that fatty degeneration has taken place which has lately been described by Mr. Rainey, it cannot be expected that any restoration of the pulmonary structure can take place. But much may be done to prevent extension of mischief by limiting the duration and intensity of the attacks of bronchitis. In a case, however, like Gardner's, in which the emphysema seems to have gone no farther than a simple dilatation of the smallest bronchial tubes and air-cells, I cannot doubt that the removal of the exciting cause of the bronchial irritation would lead to the complete restoration of the lungs to their natural condition.

Original Communications.

CLAIRVOYANCE AND THE CLERGY.

By ROBERT HULL, M.D.

Senior Physician of the Norfolk and Norwich Hospital.

THE first part of a work, entitled "Illustrations and Enquiries relating to Mesmerism," was published in 1849. It is from the pen of the Reverend Dr. Maitland, F.R.S., F.S.A. This learned divine appears to be a believer in the asserted facts of *clairvoyance*, and he is very logically, on an assumption of facts, puzzled what to make of this power: whether it be compatible with true physiology, and with the ordinary well-known human faculties. Dr. Maitland does not affect physiology. He is a divine; and he turns with an anxious inquiry to the physiologist, as to the natural possibility of a human being performing the feats which are called *clairvoyance*?

Is *clairvoyance* a natural power? Physiology says no—*clairvoyance* is *not* a "power which belongs naturally to man, or to one man in a given number."

Its marvellous stories are not founded on physical truth. Many have been

shown to be the fabrications of wilful liars; and as they are all tales of the same silly character, are we called upon to ferret out every fresh delinquent? The assertion of *physical* impossibility applies to all cases wherein the performer is declared to see beyond the sphere of natural vision: whether the asserted object be in the same house, or village, or county, or country; or in another quarter of the globe, or in the opposite hemisphere. The divines may rest assured that, if any of these sights be real, whether of the contents of pockets, or of the forests of America, they are supernatural.

Mesmerizers have elicited from the recesses of nature no new things. "The lesser phenomena," as they are called, have been witnessed in all ages, in the course of nervous maladies. Hysteria, hypochondriasis, oneirodynia, somnambulism, catalepsy, have displayed the mesmeric symptoms. The difference is, that they have arisen spontaneously, while mesmerism induces them.

But *clairvoyance*—*clearseeing*—is of the greater or higher phenomena, and can, if real, have nothing natural about it.

The wretched stuff which is contained in the pages of the *Zoist*, as quoted by Dr. Maitland, I should feel degraded to pick to pieces. I am sure that the tales are not worthy of refutation, scarcely a sneer; and how even so laborious a student as he must be, can have the patience to copy its absurd stories, it is hard to explain. Not one of the cases of *clairvoyance* ever published comes free from a character of imposture, or lucky guess, or self-deception, or insanity. But lucky guess is imposture. For the pretension to see what is only guessed, even if the guess be right, is culpable imposture. It is no light crime to pretend to miraculous power. The stern decree of physiology is, that people cannot see but with their eyes; hear, but with their ears; taste, smell, feel, but with the appropriate organs. We, physiologists, can render no assistance to the dubitant or distressed divine. We deny the facts. The theologians must decide, if *they* admit the facts, whether, being supernatural, they are illustrations of evil or holy agency. We have done with the business; except we choose to utter the dictates of common sense, and our *lay* sentiments about the supernatural, or magical, bibli-

cal subjects, which the clergy are bound officially to deal with. If the facts were true, we should have the being whom we "dread to name," ordering or permitting miracles to astonish the minds of imbecile men and silly girls; miracles performed by hysterical young women and pubescent lads! Petty tricks enacted of peeping into paper boxes, into walnut shells, into jacket-pockets!

(Tales) an gloria magna

Insidias homini, composuisse Deum?

It is for the divines to discuss, whether jugglery, which has been proved to be perilous, is identical with the magical arts of ancient days; if they believe the facts. If a minx in London could see into a shop in New York,—or a young scape-grace in Paris could view the study of an Essex clergyman, these personages depreciate the miracles of revelation wrought for the grandest purposes which immortal souls can recognise. They who cannot distinguish the dreams of the hysterical, the colloquies of the somnambulist, the impositions of the designing, from true miracles, are in some danger of going whither certain pert, self-sufficient mesmerists have already gone,—into infidelity and atheism.

If physiologists could once believe that *clairvoyance* really existed, they—the Christian portion at least—must also believe in diabolic, not celestial agency, in the matter. For mesmerism is chargeable with many bad results, as its history, especially on the Continent, has shown—lasciviousness, seduction, infidelity. The trial of the mesmerising physician at Berlin,—did it not establish seduction? did it not establish in many minds murder—that is, successful attempt to produce abortion? A report of this melancholy business may be found in the MEDICAL GAZETTE for 1841, page 57. If Dr. M. has never seen this, the probability is, that he has only perused the Zoist, and such partisan works, and that he does not even know that Messieurs Alexis and Marcillet fled from London and the cross-examination, that is, *crucial* experiments of Dr. Forbes. The clergyman who resides "north-east of London," should learn that these gentlemen are not unacquainted with English ground. They have travelled beyond Paris.

But, we ask the believing divines, those who credit *clairvoyance*, whether

it is probable that the *supernatural* phenomena imply moral security and heavenly interference, when Mesmer himself began with the voluptuous and the *carnal*?

Persons of both sexes flocked to Mesmer, to feel or witness the strongest emotions. The desire of varying the worn-out stimulants of this sensual capital (Paris), "in its most depraved era, filled his halls with youth, beauty, fashion. Youths, remarkable for manly symmetry, were the chosen assistants. They were employed in making tractions on the body, and for hours together, in compressing and kneading the *hypogastre* with the open hand,—delicious airs were poured forth, and everything was resorted to which could excite the senses and the nerves. Extravagant bursts of sympathy between persons hitherto unknown to each other seemed to threaten to level the wholesome distinctions of society. Mesmer seemed to move like a supernatural being amid the contorted bacchantes.

"The Academy of Sciences and the Faculty of Medicine were commanded to investigate. All the Commissioners united in drawing up a *secret report* for the king alone, which was subsequently published, stating the danger of mesmerism as to morals; a danger, which, according to Mesmer's own avowal, was anything but chimerical, as he confessed that women subject to its influence could no longer control themselves?" See Quarterly Review, vol. 61.

Now, is this an art, the physiologist asks the divine, which, if it display supernatural phenomena—and such must be *clairvoyance*—is likely to proceed from heaven? In connection with this department of the subject, it must never be forgotten that the magnetists, according to their own confession and experience, "operate most forcibly and certainly on women; and of these on the most sensitive and impressible in their youngest years. Women between the ages of fifteen and forty-five are readily excited by magnetism. Old ladies and robust gentlemen are non-conductors."

Why should heaven be so partial to the young and the feminine—so sparing of supernatural influence to old ladies and robust men? Dr. Maitland seems rather insecure upon this point; as a

dignified clergyman well may. He does not exactly relish an expression of Dr. Elliotson, who, while he asserts that, from the time of the Okeys to this day, the mesmeric state has apparently nothing sexual in it, but is of the purest kind, adds—"Those who think they have seen anything else must have seen with the eyes of a prurient, impure imagination, *unless* the unjustifiable experiment of mesmerising amativeness has been made." This one word has startled the divine more, and has more weight, than all he has heard from the opponents of mesmerism. Well it may! Is this an art which divines and the virtuous ought to sanction? "Take care in your passes that you do not mesmerise amativeness, for if you do"—What? Is this an art which brothers, fathers, husbands, should permit? But needs amativeness to be mesmerised to show the impropriety of mesmerism? I quote this passage from the pamphlet to show the perils of mesmerism as admitted by a mighty performer, who believes in craniology, with an assumption that others are equally credulous. Is this an art which clergymen should tolerate? Needs a mesmerising of amativeness be effected to show the impropriety of this art? If young, sensitive women, however chaste and delicate, be passed or willed into helpless sleep by young, enthusiastic men, however virtuous and honourable, can it be decorous? Can the opposite sexes mesmerise each other with delicacy?—can they by possibility, considering that, after all, human nature is human nature.

I had proceeded thus far when I lent Dr. Maitland's pamphlet to Dr. O'Callaghan, of the 11th Hussars—a gentleman of great sobriety of views, known attachment to the science of medicine, and, which is much wanted among practitioners in these days of credulity and juggle, a logical mind. When he returned the pamphlet, he had made thereon some remarks, which he allows me to append, which corroborate my ideas on this matter, and which should assure the doubtful or converted divine that clairvoyance is a foe with which it is his special mission to deal; that if it exists, which we deny in every asserted instance, it is as much satanic agency that effects it as ever satanic agency effected any supernatural works recorded in Scripture; but that

it is out of *our* province to discriminate the nature of the Biblical miracles, which we leave the divines to discuss, only hoping that they will not arrive at the convenient doctrine laid down by a mesmerising physician quoted by Dr. Maitland, and shared by a female disciple, that the devil has no real existence. The mesmeriser requests the patient to look into his eyes. Is it proper that a female should obey this injunction? If she be a respectable person, can she? But why is she to look into his eyes? I say, why? Is there not something in this which trenches on the Paphian? But it is not *necessary* that the female should gaze in this intent manner. If she cannot—if she has modest eyes—

Οὐ γὰρ ὀρθοῖς ὁμμασίῃ σ' ἐτ' εἰσορῶ—

then we are told it does not so much signify: the operator can influence without the mutual stare. Then, why seek it?

Mesmerism is sensual. It hath been shown to be such in the days of its inventor, of Cagliastro—of the Berlin physician. But the dupes, the victims of these genii, were of a higher, more refined class. Do people fancy that anything, good or bad, is long confined to the upper classes? This abominable art has extended already to the lower class.

In Norwich—a city ever ready to welcome anomalies and fooleries—A. B. attempted to affiliate a child to C. D., who denied most solemnly the possible paternity. But A. B. held out upon this statement, that she was never conscious of immoral conduct, but that, as C. D. was a ranter parson, and her mesmeriser, *he* must have taken advantage of a mesmeric sleep!

"What does this prove?" Whosoever you are who put this question, you know what it proves. Let us have no special pleading.

Dr. Maitland, *assuming* the facts, and fancying that these facts must be accounted for somehow—seeing that they are attested, as they are, by honourable persons—accounts for them, or would if he could, by a similarity to ancient magic; this magic assumed to be not devilish, but only forbidden for wise purposes by the Deity. No, Dr. Maitland! If we Christian physiologists are free to interpret the Bible, the rites of the Egyptian magi were diabo-

lical, and those of all magicians down to the era of Christ; and *if* the present performers of clairvoyance *speak* to realities seen by them in boxes, shells, closets, wrappers—*if* so, we are sure that the Evil One of past sorceries—not—

“Ipse Deus somno domitos emittere vocem
Jussit et invitos facta tegenda loqui.”

Dr. Maitland cannot doubt that the Biblical magic and sorcery were realities; but he is not aware that they were performed by *Satanic* agency:—“They were undoubtedly sins—perhaps as great sins, as easily committed, and as diabolical as murder—as truly ‘works of the devil’ as other wickedness; but not more to be ascribed to satanic agency, or any diabolical interference with nature. Some of the forbidden practices might be only an unlawful, because a forbidden use of natural powers.”

To this sad and pitiful style of theologic argument is good Dr. Maitland reduced, because his postulatam is, that clairvoyance is not a figment. He calls the *pactum diabolicum* a recent invention, and that nothing is said of the Egyptian magicians having made a compact with Satan. What sinner ever makes a *formal* compact? But, as the ancient sorceries are admitted by Dr. Maitland to be sins, if the mesmeric performances are like them, then are these, so far as similar, equal sins!

I subjoin Dr. O’Callaghan’s letter!

The Close, Norwich, 4th Oct. 1851.

MY DEAR SIR,—I beg to return the Rev. Dr. Maitland’s pamphlet, with many thanks.

I fear, however, that in complying with your request, to receive with it such observations as I might have made on this production, I shall find myself included amongst the number of those “who discuss the question of clairvoyance with disgraceful bitterness, ignorance, and folly.”

I am glad to see that Dr. Maitland does not undertake to maintain the truth of clairvoyance from his own knowledge and personal experience, but prefers to receive his facts from that extraordinary periodical, the *Zoist*,—“The organ (as he calls it) for the diffusion of information on the subject.”

At page 4 Dr. Maitland transcribes from the *Zoist* a passage, which states on the faith of a medical *gentleman*, that a lady who had been confined to her bed for eighteen months, was entranced *for the purpose* of ascertaining how a recent bur-

glary had been committed. This lady was instantaneously enabled to view the whole scene; and not only to describe and name the robbers, but to enter into the most minute detail of their complicated proceedings, even to the drugging of poor old Peter the dog!!

Now, the only observation I shall venture to make on this most marvellous performance, is to express a hope that the invaluable services of this respectable physician and patient may be secured for the benefit of the country; and that Messrs. Hume and Cobden may not interfere with the financial arrangement by which the Secretary of State shall be enabled to afford them adequate remuneration.

Dr. Maitland does not seem to be aware of the recent exposure of the renowned Alexis, as he draws largely for his facts on this worthy gentleman’s performances. He next proceeds to what he calls “the higher phenomena of mesmerism,” as described in the case of Ellen Dawson, and her sister. These interesting young ladies, after eclipsing Signor Blütz, and Madam Robin, with the most startling feats with a *cup and* (cotton) *ball*, and a ring, &c., were immediately transported at the will of the mesmeriser not only through various parts of England, but out to sea, on board ship, across the Atlantic Ocean to America, landing at New York; proceeding with electric speed, but observantly, over that vast Continent, to its utmost limits.

As their mental bodies are borne along by the uncontrollable impulse of the directing will of the mesmerist, they describe every thing they see with the most minute accuracy; the ship, the voyage, the harbour, the city, the face of the country, the forests, the wild beasts, and the red Indians, with their squaws, and children in their wigwams!

What a pity he did not conduct them a little *farther north*, and ascertain where poor Sir John Franklin and our long absent countrymen are located, and how they are now circumstanced.

In all these miracles nothing astonishes one more than the utter disproportion of the means to the end. I do not believe that the magi of old, witches, or “familiar spirits,” nor even the devil himself, could surpass the performances of Dr. —, in the nineteenth century. But the wonder of wonders is, that the agents in all these thaumaturgical exhibitions appear to be contented with the disinterested reward of their own self-approval, and the gaping credulity of their admiring disciples!

Was there ever known such extraordinary self-denial? Why are Dr. —, or Mr. —, struggling in a laborious profession to maintain with difficulty a moderately re-

spectable position, when they might become the possessors of untold wealth, and at the same time the most bountiful benefactors of society? What would Baron Rothschild give for an occasional hint from Ellen Dawson? How would the Czar of Russia, the King of Naples, Pio Nono, or Louis Napoleon, estimate such services as Dr. — could so easily and speedily command?

But, seriously speaking, how is one to deal with a theological disquisition founded on such a basis as the following extract?

"We have the phenomena before us, of an existence at once dual and single; for when the sleep-waker's capacities are acting under the immediate direction of the mesmeriser, the latter may be considered as making up together with him the complement of one full being, whereof the mesmeriser supplies the willing and the conscious portion, and the patient the intellectual portion!"

"Only one step farther, the intervention of a third person, and he beholds the most incomprehensible of the divine mysteries, exhibited before his bewildered gaze. Surely, the trinity in unity can be conceived as easily as 'the duality in unity!'"

At page 45 Dr. Maitland says—"I have not gone out of my way to select the most startling phenomena that are to be found in reported cases"....."It is right, therefore, to mention that some *respectable* writers on mesmerism, while they do not hesitate to relate matters which to the uninformed seem almost incredible, do nevertheless intimate that they could say *more*. They could tell of things more wonderful *if* there were not reasons for silence!" What an awful if!

I fear I occupy too much of your attention with these transcripts from Dr. Maitland's extracts from the Zoist. I do so only to show, how very unreasonable he is, to expect that physiologists can explain miracles; for if a human being can be made to see, by any other means than the organs of vision, so providentially adapted for the purpose, that is as much a miracle as to make "the deaf to hear, the blind to see, and the lame to walk."

I must suppose that you do not require me to make any observations on the theological speculations of Dr. Maitland, and therefore I shall conclude this tedious letter, with the expression of my serious regret, that a gentleman of his sacred profession, and distinguished attainments, should have so far compromised his high position, as to associate for the first time, the miraculous agencies recorded in the holy volume of our eternal salvation, with the protean hallucinations of hysteria, the erratic dreamings of catalepsy (occasionally

induced artificially, but more frequently simulated with astonishing resolution and ingenuity), the wild speculations of deluded enthusiasm, and the crafty imposture of sordid charlatantry.

Believe me, my dear sir,

Yours most sincerely,

P. O'CALLAGHAN,

Surgeon 11th Hussars.

ON THE PHYSICAL DIAGNOSIS OF DISEASES OF THE ABDOMEN.

BY EDWARD BALLARD, M.D.

Late Physician to the St. Pancras Royal General Dispensary, &c.

[Continued from page 839.]

Diseases of the intestines—flatulent distension—colic—faecal accumulations in the colon—concretions—intestinal obstruction—inflammatory thickening—cancer—invagination—tenia.

Diseases of the Intestines.

Flatulent distension of the intestines may occur in conjunction with distension of the stomach, or apart from it. The colon and the small intestines may be affected together or separately. In either case, the distension, if considerable, produces general rounded enlargement of the abdomen, which is even upon the surface, and does not vary with the posture of the patient. The lower ribs are pushed more or less outwards, and the epigastric angle increased. When the small intestine is distended, its convolutions may be visible upon the surface. The respiratory movements of the lower ribs and abdomen are lessened. The lower circular measurements of the chest and abdomen will be increased, but, if the stomach be not distended at the same time, the normal relation of the two sides will be preserved. If flatulent distension of the stomach, however, be conjoined, there will be an excess of semicircular measurement upon the left side. There will be a sense of elasticity on pressure over the distended soft parietes, varying in different parts according to the condition of the subjacent portion of intestine. Where the colon is affected, its form and outline can sometimes without difficulty be perceived. Percussion elicits a tympanitic resonance over all the surface

corresponding with the distended bowels; it may be of the same tone everywhere, but there are, for the most part, variations to be noticed in different parts. The tympanitic sound does not supersede the dulness of the liver, or the peculiar sounds elicitable over the stomach, but merely displaces them. The organs above the arch of the colon are all pushed upwards; the liver, even when considerably enlarged, may be made to ascend, and its dulness will be found to extend high into the chest, while some difficulty may be experienced in determining exactly the full limit of its lower margin. The lungs and heart will also be pushed upwards, and the signs of this condition will be observed—viz., elevation of the impulse and sounds of the heart, deficient downward extent of the pulmonary breath-sound and vocal vibration, &c. On auscultation, all the sounds heard over the intestines will be amphoric in character, and metallic tinkling may be observed. The intestinal distension may be circumscribed, especially where it occurs in the colon: it will then be indicated by a fulness in some part of the course of the canal, which may be elastic to the touch, or may simulate a solid tumour by its firmness and defined form. Such a tumour occurring over the cæcum sometimes disappears on exercising firm pressure over it with the flat hand as the patient lies on his back; its subsidence being accompanied by a gurgling sound. In all cases it will be resonant on percussion.

Colic is a disease in which the muscular coat of the bowel is affected so as to result at one time in contraction, and at another in distension, or both of these may be conjoined, one part of the intestinal tube being spasmodically contracted, while a neighbouring part is distended. These changes and conditions will be indicated by corresponding appearances externally, such as general or partial and varying enlargement or retraction. The latter is commonly noticed, especially in lead-colic, to occur around the navel, while there is fulness in other parts of the abdomen. The retracted parts have a hard knotty resistant feel, which sometimes yields to firm continued pressure of the hand, while the fuller parts of the parietes are yielding and elastic. There may be observed, especially over the cæcum and sigmoid flexure, distension and

fulness of the parietes, lasting for a short time, and then subsiding with loud roaring borborygmi. The distended portions of the abdomen will give the resonance of gaseous accumulation, while the retracted portions will be duller than natural.

Fæcal accumulations in the colon may occur at any part of the course of the canal, but most commonly they are noticed in the cæcum or descending colon, sigmoid flexure, or rectum. When of small amount there may be little or no external indication visible, but when occurring in the situations mentioned, the accumulation may be considerable, and even be accompanied by inflammatory thickening of the bowel. These larger accumulations will produce visible fulness in either iliac region or flank, or in the course of the transverse colon according to their site. Where a flatulent condition of the small intestines is conjoined, the abdominal enlargement will be general, but when this part of the intestine is free from gas the central regions of the abdomen may be flat, while the parts occupied by the colon may be distended so as to alter the general aspect of the abdominal parietes. Often, however, it requires the application of the hand to detect tumour, and even this may be a matter of some difficulty from the muscular resistance opposed to it. The most common seat of tumour is the iliac region or flank upon either side, but it may be found almost any where in the abdomen in consequence of the very strange positions which the colon may assume. In consequence of this, we should be very guarded in an opinion as to the part of the intestine at which the accumulation has occurred, or in denying an abdominal tumour a colonic origin merely on account of its position. The cæcum, for example, full of gas or fæces may be removed from its natural position in the right iliac fossa, and lie in the middle line over the inlet of the pelvis, or even in the right iliac region, or it may be displaced upwards into the right flank, or by the side of the vertebral column. The sigmoid flexure, again, may form a tumour either in the right flank or iliac fossa, where it may overlay the cæcum, or in the hypogastrium, while the transverse ascending and descending colon may occupy the most extraordinary situations, and run in the most extraordinary

curves. Some of these displacements are figured in Annesley's celebrated work on the Diseases of India, and their occurrence must be very familiar to all accustomed to examining bodies after death. While tumour is thus found somewhere in the course of the colon, or while the whole of its length may give a sense of resistance to the hand, the central regions of the abdomen corresponding to the small intestines will present more or less of their normal elasticity. Where there is definite tumour its form is commonly oval or cylindrical, with some unevenness of surface: over the cæcum it represents the sac-like shape of this portion of the cavity, and when in the curved course of the sigmoid flexure it may assume an absolutely irregular shape. It is mostly situated just beneath the wall of the abdomen, but when in the lower central regions some coils of the small intestines may be in front of it, and deeper pressure may be required to arrive at the tumour. Its size may vary from being just perceptible to the hand, to one which may simulate renal, hepatic, or splenic enlargement. When the accumulations are distributed throughout the canal the whole abdomen may be tense, hard, and tympanitic, and deep-seated tumours may be felt in various parts, especially on the left side, resembling those produced by glandular tumour, from which it may not always be easy to distinguish them. The mobility of a tumour from faecal accumulation will correspond with that of the portion of bowel which it occupies, and with the adhesion of this to the parietes, &c. When in the cæcum it is not altered by the position of the patient, or capable of being moved by the hand, but in other portions of the tube there is more mobility, but less in the ascending and descending positions than in the transverse or in the sigmoid flexure. When in the transverse portion its position may alter a little with that of the patient, and when in the sigmoid flexure continued pressure may displace it a little backwards. The consistence of the tumour varies; in all cases it is inelastic, in some quite hard; in others, where the faeculent accumulation is soft, it may have a doughy feel, and be capable of being impressed, and in some degree moulded by the fingers. Percussion will give over the seat of tumour a sound which, if the bowel be

quite distended and free from gas, may be completely dull, without any of the elastic sensation of gaseous intestine; but for the most part this degree of fulness is not attained, and the tumour gives in closely adjoining parts dulness and resonance. This mixed percussion sound, in whatever part of the abdomen it may be observed, is very characteristic of the nature of the tumour. The situation and size of these faecal tumours leads constantly to their being mistaken for a variety of other abdominal diseases. The result of active purgation and enemata will often, by removing more or less completely the signs of tumour, dispel all doubt of its origin. It sometimes simulates very closely a solid renal tumour, occupying exactly the situation of the latter in the flank, but it differs from it in not producing fulness in the lumbar region posteriorly, in being less broad, more elongated, and more cylindrical.

Intestinal concretions arising from the accumulation of various indigestible matters in the bowels, commonly occur in the cæcum or ascending or descending colon. According to their size and position, they will give rise to visible and palpable tumour, its form being that of the concretion. When a portion of the bowel is distended with matters of an indigestible nature, through any considerable extent, it may present a cylindrical form. The tumours will always be hard, and when an accumulation of hard bodies, such as cherry-stones, has taken place, as in a case recorded by Cruveilhier, a sense of crepitation has been given to the hand. A similar sound has been heard on pressure by aid of the stethoscope. The tumours are often moveable, but this occurs when the concretion is situated in a moveable portion of the bowel, such as the small intestines or the transverse colon. Percussion elicits a dull sound over the tumour, not varied with resonance as in faecal accumulation.

Intestinal obstruction arises in connection with so many morbid conditions both of the intestine and peritoneum, that it becomes necessary to describe its signs apart from those of its anatomical causes. It may occur at any part of the bowels from the duodenum to the rectum. Its great physical characteristics are those signs which indicate a state of emptiness below the seat of obstruction, and of fulness and

distension above it, increasing in proportion to the duration of the malady. The distension will occur principally in that portion of the digestive tube which happens to lie immediately above the obstructed part. Thus, when it is seated in the first few inches of the *duodenum*, the stomach may become dilated, and the signs of this state may be as fully developed as in cancer of the pylorus; and, if early vomiting after food should prevent the occurrence of this, the signs before alluded to of emptiness and collapse of the intestinal canal, with dullness, retraction, &c., may nevertheless be apparent. When the seat of obstruction is elsewhere in the small intestines, the physical signs of fulness above and emptiness below will be regulated for the most part by the height of the obstruction, and its distance from or nearness to the end of the ileum. When *at or near the ileo-colic valve* there will be signs of distension of the small, and emptiness of the large intestines. These will consist in rounded enlargement of the abdomen both to the eye and to the hand; the convolutions of the small intestines, filled with flatus and liquid fecal matter, being often clearly traceable through the thinned abdominal wall, and their vermicular movements of alternate elevation and depression visible. They may also be felt by the hand apparently greatly dilated, to rise and roll over with loud borborygmi. The portion of the tube immediately above the seat of obstruction having become hypertrophied, can sometimes be felt as a resistance, and on applying the stethoscope in this situation a gurgling sound may be heard from the mixture of gas and liquid feces, and sometimes also a spontaneous sound of fluctuation where this portion is much dilated. The distended part of the abdomen will be resonant on percussion where it contains gas, but dull just above the seat of obstruction from accumulation there of the alimentary matters. All the signs, however, of the presence of matters in the intestine may be wanting where there is sufficient retropulsive action of the bowel to produce stercoraceous vomiting. While there are these signs of enlargement of the small intestines, the colon will be empty, and give no resonance in its course, even the cæcum and sigmoid flexure not furnishing their accustomed sound on percussion. When

the obstruction is high in the small intestine, there is mostly flattening of the greater part of the abdomen, or even of the whole of it, with defective resonance on percussion,—but even in this case tympanitic distension of the abdomen may occur. *Obstruction of the large intestines*, if in the sigmoid flexure or rectum, will produce abdominal fulness, either general, or in the course of the colon, or especially in the left iliac region and flank; and the latter will be doughy or inelastic on palpation and dull upon percussion; the rest of the colon and the central regions of the abdomen being resonant according as they contain gas or fecal matters. The position of the obstruction in the rectum and sigmoid flexure may be determined by examination by the finger introduced into the bowel, or, if it be situated higher than it can reach, an elastic rectum-tube may be introduced, and passed up till it meets with resistance. A fallacy attaches to the latter proceeding, inasmuch as the tube may, on reaching the obstruction, become bent downwards and curve back upon itself towards the anus. On injecting warm water an idea may be formed of the distance of the obstruction from the anus, by noticing how much can be thrown up, which will be less in proportion to its nearness to the termination of the bowel. When the obstruction is above the descending colon,—as at the gastro-splenic curve of the bowel,—there will not be the equal fulness of the flanks sometimes noticed when the obstruction is in the sigmoid flexure or rectum; but, while the left flank is not fuller than customary, there will be fulness in the course of the transverse colon and right side of the abdomen. If it occur at the hepatic curve, the fulness will be remarkably on the right side and in the right iliac region, so as to produce the most obvious and positive deformity, with fulness even over the lumbar region posteriorly. When the obstruction is only a little above the cæcum, this may form a large dilated tumour in the right iliac region, extending upwards and to the left. The nearer the obstruction, also, to the ileo-colic valve, the greater will be the evident distension of the small intestines, so that, in the case of its proximity to the cæcum, there will be visible also, in most cases, the distended convolutions of the bowels, and

their peristaltic movements of elevation and depression. The administration of a large injection into the bowels will indicate, by the height to which its dullness may be traced by percussion, the extent to which it has penetrated, and thus, also, the situation of the obstruction.

Inflammatory thickening of the intestinal tube arises often as the result of the irritation of retained and accumulated excrementitious matters, and remains even when these have been fully discharged. It may occur in the small intestine, where careful palpation may detect it, giving the idea of a thickened tube, which may be made to roll under the hand, and be less resonant on percussion than other parts of the small intestines. Its most common seat is at the cæcum or sigmoid flexure of the colon. Inflammatory thickening of the cæcum occurs as the typhlitis of Dr. Burne, and is a common accompaniment and sequel of accumulation in that portion of the bowel. It produces, if dilated to any extent, fulness in the right iliac region, and at any rate more resistance to the hand than in the left iliac region, or palpable tumour more or less deep-seated, according to its size, and more or less defined, not changing its position with the movements of the patient, and being immovable by the hand. There may be muscular resistance over the seat of tumour, and rigidity of the right rectus muscle; but where this state does not exist the abdominal wall may be felt to have no connection with the tumour. It may be so chronic in its nature and so hard to the touch as to be mistaken for an ovarian tumour. On percussion there will be found less resonance and less elasticity than over other portions of the intestine. The tumour may become adherent to the abdominal wall, and, either through the adherent part, or posteriorly, where uncovered by peritoneum, the thickened bowel may be perforated, and then a thin circumscribed emphysematous tumour may present itself anteriorly above Poupart's ligament, or posteriorly by the side of the quadratus lumborum muscle, and the abscess will discharge itself upon the surface. When the thickening affects the sigmoid flexure it forms a palpable elongated tumour, rolling under the hand, and duller on percussion than other portions of the tube. It is not an uncommon result of

dysentery or dysenteric diarrhoea. It may be accompanied by more or less muscular resistance to the pressure of the hand, and sometimes there is rigidity of the left rectus muscle. This tumour, like that of the cæcum, may become adherent to the parietes, ulcerate through, and form an abscess over Poupart's ligament, containing faecal matter and gas, and giving to the hand a soft and emphysematous feel. When the thickening of the canal occurs in the descending colon it may form a sac or cyst, giving to the hand the sensation of a firm deep-seated swelling in the left flank, capable of being mistaken for an enlarged spleen, but varying at different times, according to its state of fulness or collapse, and dull or resonant, according to its contents. Where the thickening at any part narrows the canal, the signs of intestinal obstruction described above may become superadded.

Cancer of the intestines.—In the small intestines, the jejunum and duodenum are the parts commonly affected, and the signs produced are those already noted as belonging to thickening of the tube from deposit of a non-malignant character, and ultimately those of intestinal obstruction. Tumour assuming the form of the intestine may thus be felt as a thickened coil under the finger, or it may assume a more or less circumscribed and rounded form: when ascertained to lie between the colon and the margin of the liver, and to be from its resonance non-hepatic, it may be presumed to belong to the duodenum. The tumour may be more or less fixed and irregular upon the surface, and less resonant than other portions of the bowels; its character may also be judged of by its extension towards the deeper seated parts, as felt by the hand. Flatulent distension of the bowels may easily obscure the indications of tumour. Cancer occupying the large intestines is more readily detected; the tumour it produces will correspond in situation with the portion of the canal it has invaded, occupying the left iliac region and hypogastrium when in the sigmoid flexure, crossing the abdomen when in the transverse colon, &c. In the former situation its form is often irregular from implication of the peritoneum and adjoining tissue, and it is fixed and immovable. In the transverse colon its form is mostly oval, its length

being transverse, its surface more or less irregular, and it may be moveable or fixed, according to the adhesion or the implication of other tissues: in any case it may produce visible tumour over its seat, and pulsation forwards may be transmitted from the aorta. Its resonance on percussion will be defective, or it may sound absolutely dull. In proportion as it encroaches on the canal of the bowel the signs of obstruction will become superadded. I have noticed colloid cancer have the effect of shortening remarkably the length of the colon; when occurring in the ascending part it may thus occasion the transverse colon to cross the abdomen considerably below the navel, while in colloid of the transverse portion the cæcum has been raised out of its natural situation in the right iliac fossa, and manifested the signs of its presence in the flank. Cancer of the rectum produces the signs of obstruction in this portion of the tube, and may be perceived on examination with the finger or bougie. When the growth occurs from its anterior surface it may produce some anteversion of the uterus, perceptible by careful vaginal examination.

Intussusception or *invagination* is one of the causes of obstruction of the bowels. It is said to be capable of physical diagnosis by the *sudden* appearance of tumour of elongated form and rolling under the finger, together with dulness on percussion occurring when the symptoms of intestinal obstruction are present. Of course the only time when this sign can be expected to be perceptible is prior to any considerable enlargement.

Tænia has been said to be marked by dulness on percussion, and the sound on auscultation before described, but which hitherto I have never been fortunate enough to hear.

42, Myddelton Square.

MEDICAL APPOINTMENTS.

LONDON HOSPITAL.

DR. PARKER has been elected Assistant-Physician to this Institution in the place of Dr. Pereira, who has been appointed Physician.

ST. BARTHOLOMEW'S HOSPITAL.

Dr. BLACK, Assistant-Physician to this Institution, has been appointed Warden to the Collegiate Establishment, in place of Mr. Paget, who has resigned that office.

TWO CASES OF DEATH OCCURRING AFTER SCARLATINA:

IN THE ONE CASE BY VENOUS HÆMORRHAGE (PROBABLY FROM THE INTERNAL JUGULAR VEIN);

IN THE OTHER, BY ACUTE NEPHRITIS, WITH PROBABLE PURULENT INFECTION.

REPORTED BY DR. FREDERICK J. BROWN.
Chatham, Kent.

I NOTICED in a recent number of the GAZETTE, a case of death by ulceration of the internal jugular veins, occurring after scarlet fever. I beg leave to send you one case of death by venous hæmorrhage from one of the jugular veins, after scarlet fever; also a case of death from the sequelæ of the same disease, with interesting post-mortem appearances.

The source of hæmorrhage in the first case to be related, was not demonstrated, notwithstanding that a dissection of the body was made. The mind of the examiner was so engrossed by the idea of finding ulceration of the internal jugular vein, that insufficient care was taken to examine the external jugular vein. Moreover, the examination was hurried at the instance of the friends.

Edward S., aged five years, a stout and healthy boy, residing in the vicinity of Rochester, was seized on the 21st of June, 1851, with sore throat and other symptoms of scarlatina. The rash appeared next day. The child was placed under the care of Dr. John D. Brown, of Strood. After a few days the glands on both sides of the neck enlarged, and the child fell into what appeared to be a low form of fever, subsequently to the disappearance of the rash.

On the 30th June, there were extensive indurated swellings on both sides of the neck, and a suppurating point was discovered about an inch and a half below the angle of the jaw, on the left side. An incision through the softened spot gave exit to pus. The surface of the body generally was harsh and sallow. Beef-tea, wine, and carbonate of ammonia, were prescribed; and a few days later, the extract of sarsaparilla.

Retention of urine occurred about the 10th July, and again next day, requiring in each case the introduction of the catheter as far as the membranous portion of the urethra, when the urine flowed away. At this period the child was greatly reduced in strength, and there was a daily discharge of matter from the cervical abscess.

At the 12th July, at 4 P.M., blood issued from the orifice of the abscess suddenly, and to an alarming amount. The hæmorrhage recurred in smaller quantity through the evening. The amount of blood lost was stated by the friends to be a gallon (evidently a great exaggeration); but it is certain that the blood ran through a flock-bed and formed a pool on the floor, as is sometimes seen in puerperal hæmorrhage. Dr. Brown did not see the patient until after death (next day), and a medical friend who visited the child for him, did not think it necessary to plug the orifice of the abscess, as there was no hæmorrhage during his stay at the house.

Next morning at 4 o'clock, the bleeding suddenly returned for a few minutes, then ceased till six o'clock, when it again occurred. The orifice of the abscess was now plugged by the medical gentleman referred to. The child died exhausted at half-past 12, P.M., 13th July; no further hæmorrhage having taken place.

Examination of the body 47 hours after death.—Weather hot during half that period.

Posterior surface of the body livid.

Face sodden. No rigidity. The friends stated that it had occurred immediately after death, and that it disappeared before the conclusion of the laying out the corpse.

The skin was dissected off the left side of the neck; that part of it around the orifice of the abscess was greatly attenuated and softened so as to break like wetted paper.

The cervical fascia was found to be ulcerated through at this situation, affording a communication between the matter deeply located and that furnished by subcutaneous ulceration. The skin was loose and detached for several inches in extent.

On raising the sterno-mastoid muscle, after cutting across the lower attachments, it was found that the middle

portion of the muscle was inseparably adherent to the thickened cervical fascia and to the internal jugular vein. The parts were matted by recent lymph. The portion of the muscle above the omo-hyoideus was softened, together with the cellular tissue and fascia. Immediately after the exit of the internal jugular vein from the jugular fossa, its course was surrounded by putrilage. In dissecting out this part, the jugular vein was laid open accidentally. There was no blood in it. The piece cut out was from the anterior aspect of the vein, and about one third of an inch by one sixth; either a piece was cut out horizontally by the knife, or a sloughy portion separated in lifting out the putrilage. The edges of the injured vein were sound, and there was no appearance of disease in the jugular vein in any part. Pus was diffused beneath the cervical fascia as low as the pleura, but none escaped into the forepart of the neck, or appeared in the anterior mediastinum. There were numerous glands swelled and filled with pus. One such was situated close to the veins at its exit from the skull, but no aperture was found in the glandular abscess.

The carotid artery and pneumogastric nerve appeared healthy.

The external jugular vein escaped examination in the great changes of structure that existed; its lower portion, however, was healthy.

On the right side of the neck there was a great pouch of matter formed out of suppurating glands.

Thorax.—Serous effusion (apparently dropsical), in both pleural cavities; also in pericardium. Left ventricle of heart firmly contracted, without contents, except a few drops of liquid, unhealthy-looking blood. Similar blood in large quantity, on right side of heart.

Lungs emphysematous, and of a chamois leather colour and appearance.

Abdomen.—Liver large.

Spleen very large even for an adult; firm and apparently healthy in consistence.

Kidneys greatly enlarged, and so soft as to fluctuate. The whole tissue of a buff colour, except a bunch here and there of cortical structure of a fawn colour.

The yellow, loose, fatty-looking tissue presented pus globules under the microscope.

The second case occurred at Chatham, and was seen by Dr. Frederick J. Brown about 30 hours before death. The child had no medical attendance for twelve days.

Charles F., aged 8 years, was seized, on the 7th September, 1851 (according to the friends' statement), with vomiting and looseness of the bowels. A scarlet rash appeared on the 11th, and was partial in its distribution over the body. Abscesses on each side of the neck supervened, and were succeeded by painful swellings of the joints.

Between the 18th and 21st the child was seen by a medical gentleman (until Dr. B. could see it), who prescribed febrifuge mixtures.

On the 21st Dr. F. J. Brown first saw the case. The child was then suffering under irritative fever, accompanied by considerable mental agitation. The symptoms were, emaciation, pallor of surface, inability to sit up in bed, skin hot and dry, pulse rapid and feeble, tongue parched, bowels relaxed, and restless nights, attended by delirium. The urine was passed in moderate quantity: it was not tested. There was an immense abscess on the right side of the neck, covered by very thin integuments, and an abscess of smaller size on the left side. There was swelling of the left wrist; also of the right elbow and upper part of the forearm, unaccompanied by discoloration. The medicines prescribed were beef-tea, brandy, carbonate of ammonia, and the saccharine carbonate of iron.

In the evening there was brilliancy of the eyes; and notice was directed to distension of the epigastrium, which was crossed by an enlarged vein. There was considerable transverse protrusion of the lower ribs. There was no complaint of pains, and no tenderness. The bowels had been opened five or six times. The parents stated that the child had spat matter through the day, and had vomited slimy matters. A small incision was made into the larger abscess, when thin pus escaped. The treatment was ordered to be continued, and an enema of laudanum and catechu to be administered.

On the 22d the child was reported to have passed the night sleepless. He lay in bed making a whining noise, with the muscles of the mouth and face twitching. There was sordes on the tongue and lips. Pulse extremely feeble. There was a red oblong spot on the left forearm. The epigastrium and hypo-

chondrium continued in a distended condition, but the child denied that he suffered more than a sensation of something being tied tightly round his waist. His mind appeared to be clear; but there was headache, and the nervous system was excessively susceptible. The bowels were opened twice in the night. The abscess continued to discharge. The child changed for the worse at 11 A.M., and died at 5 P.M.

Examination of the body 26 hours after death.

Rigor mortis; emaciation; abdomen prominent and green.

Thorax.—Recent adhesions of right pleura, with effusion of several ounces of red coloured serum. Old adhesions at the apex. Deep cicatrices and puckering at the apex of the lung, with cretaceous matter in separated masses, varying in size from that of peas to that of Barcelona nuts. Excavated spaces, empty, which appeared to be dilated tubes. Anterior border of lung emphysematous; posterior portions healthy, excepting some obliterated air-cells.

Left pleura healthy. Apex of lung deeply puckered, like the other lung, with cretaceous masses of larger size, but fewer in number.

Posterior portions of the lung contained black blood within the vessels. No exudation of lymph or appearance of inflammation.

Pericardium contained more serum than natural. Heart quite healthy, but containing coagula on both sides.

Abdomen.—Small quantity of serum in peritoneal cavity. Liver enlarged and fatty, very firmly adherent to all the neighbouring structures, especially the abdominal parietes. The right kidney was torn out with it, and the stomach lacerated. The lymph appeared to be old. The vena portæ was apparently healthy, and the bile was thin and of a yellowish colour.

The spleen was twice the size of that of an adult, and was covered by lymph softer and less membranous than that over the liver. The section of the spleen presented greatly enlarged granules, and the colour was that of dark mahogany. Both kidneys were enlarged to about four times their natural size for a child of eight years: both organs appeared acutely inflamed. The cortical structure at the upper portions, and in the left kidney at the lower extremity, also, was softened, and presented

a gelatinous appearance, though it lacerated with some adhesiveness.

Pancreas was slightly softened.

Mucous lining of stomach of a dark red streaked appearance. The exterior was coated by lymph. Meso-colon reddened; intestines healthy. One cretaceous body, half the size of a pea, situated in one of the appendices epiploicæ on the ascending colon.

Glands along the aorta greatly enlarged, constituting a bed of glandular substance which extended from the iliac bifurcation to the middle of the thorax. The vena cava ascendens was empty and healthy.

There were polypous clots in the veins of the neck, and ulceration of the tissue deeply situated between the muscles. The arms were not examined, for want of time: there was no swelling of them, or external mark of disease.

Previous history of the preceding case.—Had hooping-cough three years since. Never had good health since. One year ago he spat frothy matters, and appeared to be going into consumption: he recovered. His friends (who relate the history) ascribe the recovery to the internal use of roasted figs. He occasionally suffered from pains and distension at the epigastrium.

REMARKS.—A consideration of the previous history of this case, with the post-mortem appearances, and the negative evidence afforded during the last illness, would lead to the conclusion that acute nephritis and diseased blood (with which the cervical abscesses were probably connected) and the pleural effusion were the only affections consequent on the scarlatina. In both the cases related the kidneys were recently diseased, and the spleen was greatly enlarged. The general symptoms indicated diseased blood, and in the second case related there were firm clots in the veins of the neck. There was pleural serous effusion in both cases: this I have observed in other examinations after death by scarlatinal sequelæ. The condition of the lungs, and the slow unnoticed peritonitis occurring a considerable time before the last illness of Charles F., are very interesting, as is also the glandular enlargement about the aorta. His family is scrofulous, which renders a spontaneous cure of lung disease a matter of surprise.

Rome Lane, Chatham, Oct. 22, 1851.

MEDICAL GAZETTE.

FRIDAY, NOVEMBER 21, 1851.

The Report of the Directors of Convict Prisons for 1850, which has only recently been published, has brought us ample confirmation of the opinions expressed by us last year* with regard to the effect of the SEPARATE SYSTEM of Imprisonment upon the MENTAL and PHYSICAL health of the individuals subjected to this mode of punishment.

We find therein the fullest corroboration of our statement that the separate system, if judiciously carried out, is free from danger to body and mind; and that any evils which may have attended its application are rather attributable to relaxation of the discipline, and to the diminution of the moral influences which were brought to bear upon the prisoners when the integrity of the system was unimpaired.

The conclusions which must be drawn from an examination of the recent report of the Directors of the Pentonville Prison are—

1. That mental and physical diseases have been on the increase during the past year in Pentonville Prison.

2. With relation to the causes thereof; that the discipline of the Pentonville Prison has been more relaxed and interfered with during the year 1850 than in any previous year.

Many other inferences having the same tendency with regard to the moral, educational, and economical results of the management of this prison, may be elicited from this document, but they would be beyond the legitimate limits of a strictly medical journal.

Our present object is simply to expose

* See leading articles for Nov. 22, Nov. 29, Dec. 6, 1850.

the fallacious shifts and expedients which have rendered unavailing, or thrown into the background, the counsels of some of the most profound statesmen, and of several of the most eminent members of the medical profession, falsely assuming medical reasons for the destruction of the wisest system of imprisonment that has hitherto been devised, without having given it the benefit of a fair trial. It will be seen, however, that this very fact of the premature abandonment of the discipline, thus incompletely tried, furnishes the *experimentum crucis* by which its merits may be more clearly and prominently be proved.

An alleged greater amount of insanity and bodily disease in Pentonville Prison, than in other Convict Prisons, formed the grounds of those changes the evil effects of which are now so glaringly exposed.

We looked in the present report, expecting to find some amelioration of the disastrous results which had already followed the alterations introduced into the discipline of the prison. We looked, however, in vain, although we there learn that these alterations have been adhered to by the Directors.

The all-important question of the state of the mental and physical health of the inmates is coolly passed over by the directors, in the following words:—

“The sanitary condition of the prisoners during the past year has been satisfactory.” “Five cases of insanity occurred during the year.” “The mental affections are fully stated in the appendix.”

Now, the majority of the readers of this report, being non-professional persons, would probably not be at the trouble of examining the appendices, but would consider themselves reasonably satisfied with the results which the Directors had taken the trouble faithfully to cull for their instruction. On examining the appendix, however, we find

that the truth is far from being so “satisfactory” as the Directors allege. On the contrary, it is in the highest degree unsatisfactory, inasmuch as it unfortunately corroborates the worst opinions formed of the present management of this prison.

We find some explicit information in the reports of the late physician, and of the present surgeon, which have been placed in an appendix.

Dr. Owen Rees gives us the following table, for 1850, and which to our apprehension is sufficiently gloomy:—

| | |
|---|-----|
| Deaths | 6 |
| Suicide | 1 |
| Free pardon | 3 |
| Removals on medical grounds | 40* |
| Unfit for penal labour at the termination of their imprisonment | 25 |
| Mania | 6 |
| Mental delusions | 12† |

The actual mortality in the past year has been (exclusive of the case of suicide) 12·014 per 1000; and including three-fifths of the medical pardons, which are granted on the ground that life would be sacrificed by further imprisonment, it would be in the proportion of 15·618 per 1000; whereas the corresponding averages for the seven preceding years are 6·497 and 10·948 per 1000.

The actual statistics of Pentonville and other Convict Prisons have been collected by us from the reports of these several establishments for 1850, and are here given:—

| | | |
|--|--------|----------|
| Pentonville | 12·014 | per 1000 |
| Millbank | 23·39 | per 1000 |
| Portland | 10·85 | per 1000 |
| The Hulks†, about | 28 | per 1000 |
| County and Borough Prisons in England and Wales, about | 16 | per 1000 |

Mr. Bradley, the surgeon of Pentonville Prison, takes a somewhat different view of affairs, and is disposed to estimate

* This includes the twelve cases of delusion given below.

† The data for the calculation of the mortality of the Hulks afforded by these reports may be made to give three ratios—viz., 22, 49, 69 per 1000

the mortality and mental diseases lower than Dr. Rees; but a close examination of his own figures, if the element of time be included in the calculation, will show that the actual mortality has been twice, and the insanity four or five times as great as that of preceding periods under the original discipline.

It is truly unintelligible how Mr. Bradley could, notwithstanding the very unfavourable statistics he has himself adduced, have arrived at the discrepant conclusions, that "the condition of the prison, in regard to health, may be considered as highly favourable," and that "the general tone of mind has been of a healthy character." We cannot help thinking that Mr. Bradley has drawn these conclusions with a forgetfulness of the very important and solemn issues involved in the accurate determination of the results.

Such being the *facts*, we now look for their *causes*.

Considerable stress has been laid upon the more strict selection which was formerly observed with regard to the physical and mental health of the prisoners received into Pentonville Prison; and it is also considered to be an important point with regard to the causes of the present unfavourable result, that more boys and old men are now admitted than formerly. On these points Dr. Rees remarks:—

"1st. The present mode of selecting men at Millbank for removal to Pentonville Prison does not differ materially from that adopted in former years, so far as health is concerned. A few more cases bearing marks of old scrofula may, perhaps, have been sent. All convicts suffering from phthisis, however, are still refused admission into Pentonville.

"It is highly important to remember, in connection with the subject of mental disease, as affecting the inmates of Pentonville, that the fact before alluded to, of old men and boys forming a far greater proportion of the prisoners than

was formerly the case, should have had a favourable influence on the mental health of the prison for this year."

We may add that, *comparatively*, boys and old men form a much larger proportion, because formerly none of these were admitted, whilst even now they constitute positively a small proportion. Allowing, however, the full weight which may be sought to be attached to these deviations from former restraints upon admission, we cannot overlook a very striking fact which must have gone far to reduce the returns even to their present state; and, as Dr. Rees very justly observes, "had it not been for which, they must inevitably have been worse than they are. Forty men were removed on medical grounds in 1850, exclusive of free pardons to the subjects of incurable disease."

"Now no selection," observes Dr. Rees, "of prisoners on admission, however carefully performed, could possibly have had the advantageous effect on the yearly return for health, both mental and physical, that this kind of pruning from time to time must have produced; but still we observe, unfortunately, that noxious causes in action during 1850 have more than outweighed this important means of bringing about a favourable result."

In the preceding remarks we have endeavoured to place before our readers the precise truth with regard to the effect produced upon the mental and bodily health of prisoners, in connection with the changes introduced into the administration of the separate system by the Directors of the Pentonville Prison.

We shall return to this subject at an early opportunity, and follow out what we consider to be the *causes* of the state of things which we have now indicated.

Reviews.

The Microscopist; or, a Complete Manual on the Use of the Microscope, for Physicians, Students, and the Lovers of Natural Science. By J. H. WYTHES, M.D. 8vo. with Illustrations, pp. 191. Philadelphia: Lindsay and Blakeston. London: Delf, 12, Paternoster Row. 1851.

ALTHOUGH we cannot agree with the author that this is a *complete* manual on the use of the microscope, we must admit that it is a most useful companion and guide to the scientific employment of that admirable instrument of research. We have read the little treatise through with much interest and profit, and we believe that all who are engaged in microscopic investigations will thank us for calling their attention to the importation of this volume from the United States. We may remark that it is more especially adapted to and intended for beginners; and the author qualifies the title in the preface by admitting that his work will not supersede the necessity of more elaborate works in the departments of minute anatomy and pathology.

Chapters 2 and 3 are devoted to a description of the construction of microscopes, and the various modern improvements of the instrument. The chapters 4 to 8 refer to the use of the microscope, and the details of mounting and preparing objects. Chapters 9 and 10 are altogether out of place in a book of this kind. They consist of *sixteen pages* on the cell doctrine of physiology, and the examination of *morbid structures*. The information conveyed is too meagre for any practical purpose, and we advise that in another edition either this part of the work should be enlarged or it should be altogether struck out.

In chapter 12 there are some good remarks on urinary deposits, with illustrations chiefly taken from Dr. Golding Bird's well-known treatise. Chapter 13 contains a sketch of the polarization of light, and this is followed by some useful hints to microscopists.

The work is closed with a valuable set of tables on pathological morphology, translated from Gruby by Dr. S. J. Goodfellow, from which medical

readers will derive useful information to aid them in diagnosis.

The first set of copies of this work imported into England were, we are informed, speedily exhausted by the great demand for them. We are not surprised at this, for the volume is cheap, and well got up, and although the author cannot lay claim to much originality, he has compiled his matter from good and trustworthy sources. We recommend this manual to all who have a desire to make some practical acquaintance with the wonders of the microscope—"the sixth sense" of man, as it has been appropriately termed by Dr. Babington.

Views of the Microscopic World, designed for General Reading, and as a Handbook for Classes in Natural Science. By JOHN BROCKLESBY, A.M. Small 4to. with Illustrations, pp. 146. New York: Pratt and Co. London: Delf, 12, Paternoster Row.

THIS is chiefly a compilation from the more elaborate works of Ehrenberg, Quekett, and other well-known microscopists. As its title implies, it is an essay of a more popular kind than that of Dr. Wythes. It is mainly devoted to the wonders revealed by the microscope; and the illustrations, which are on a large scale and very numerous, are for the most part selected with this view. About one half of the volume is occupied with the delineation, history, and habits of infusorial animalcules, and the other half with the structure of woods and the forms of crystals, including the microscopic anatomy of parts of insects.

There is so great a dearth of works on this valuable instrument, that any book, provided it be accurate, is acceptable and calculated to do good. In our examination of Mr. Brocklesby's work, we have found no errors of importance, but much that is useful and suggestive, even to those who have gone beyond a popular use of the microscope. The book is more intended for general than medical readers; but to all, it will convey useful information respecting that great and magnificent part of creation which would have been still unrevealed to us, but for the discovery of the microscope.

The illustrations in this work afford conclusive proof of the truth of the statement, that the more we look into

the minute works of the Creator, the more perfect are their mechanism and structure; while on the contrary, the minute works of man's hands will not bear the application of even the lowest powers, without a display of coarseness and defective construction.

Familiar Letters on the Physics of the Earth, treating of the Chief Movements of the Land, the Waters, and the Air. By HENRY BUFF, Professor in Giessen. Edited by A. W. HOFMANN, Ph.D., F.R.S. Small 8vo. pp. 273. London: Taylor, Walton, and Maberly. 1851.

THE subjects treated in these letters are of intense interest, and they require only to be made generally known to attract a large circle of readers. Among the matters selected by the editor, we may enumerate the tides, terrestrial heat, thermal springs, volcanoes, and earthquakes; the temperature of the crust of the earth, of the atmosphere and the waters, the currents of the sea, winds and tides, electricity of the air, and the general influences of these various conditions on climate.

Although in some few passages there is a slight stiffness in the style, indicative of foreign origin, yet we must admit that there is no obscurity. The editor has performed his task with skill and care. The most important truths in terrestrial physics are conveyed in plain and intelligible language; and we entertain no doubt that this volume will be most acceptable to the medical as well as the general reader, for we know of no work which contains in so small a compass, so large an amount of useful information.

Manual of Human Physiology for Students; being a condensation of the subject, a conservation of the matter, and a record of facts and principles up to the present day. To each subject are appended, in notes, Summaries in Rhyme, of the Composition of the Fluids and Solids, &c. By JOHN MORFORD COTTLE, M.D. &c. &c. 12mo. pp. 303. London: Highley. 1851.

WE are by no means disposed to assert that this work is not all that is announced on its title page. With so many valuable treatises and manuals

all ready to hand, it is no great feat to put together another manual; indeed, the volume before us does present a good outline of the domain of physiology, with a very fair delineation of the most prominent objects to be met therein; and it contains some original observations.

We protest, however, most strenuously against the perversion of language which could call such doggerel as the following even by the name of rhyme. It reminds us of the poetical effusions of Moses and Son on their articles of clothing. This is one of the many pieces of poetry (!) which disfigure the pages of this work:—

“Say of fat, when for practical purpose you view it,

Two ternary acids, in oil and suet,
Called oleic and stearic, and this is the case;

They are joined to glycerine, an alkaline base;

Of carbon say eighty: H and O say each ten;

Fatty acids contain six times more hydrogen.” (p. 36.)

The author's object in the introduction of these so-called rhymes has been to assist the students' memory, but any mind possessing taste for poetry would have a harder task in mastering these doggerels than in acquiring all the facts in physiology.

Proceedings of Societies.

PATHOLOGICAL SOCIETY OF LONDON.

DR. P. M. LATHAM, PRESIDENT, IN THE CHAIR.

November 4, 1851.

MR. POLLOCK exhibited

Sections of two Large Masses of Hair and String,

which had been removed from the stomach and duodenum of a young woman, after death. M. E. N., aged 18, came under Dr. Blakeley Brown's care, on 7th August, 1849. She had always been delicate, but more so during the last year. She appeared sickly and childish. The bowels acted irregularly, and were generally relaxed. The catamenia had appeared only once, about ten months before the above date. Appetite was variable, and she fre-

quently vomited after meals. For several months she had been suffering from a tumour, apparently about the size of a large orange, situated in the epigastric region, which projected slightly, but was not painful on gentle pressure; apparently solid, and very slightly moveable. It had very gradually increased. She complained principally of general debility, and of the inconvenience from, and of the occasional pain about, the tumour. Under treatment she improved for about six weeks. On the 30th of September, she complained of much pain in the region of the tumour, which had come on after a severe attack of vomiting. This was relieved for a short time, but reërrred the next day. Soon afterwards she became collapsed and died.

Post-mortem Examination.—The cavity of the peritoneum contained several ounces of purulent serum, and the general surface of the intestines afforded evidence of recent peritonitis; there were also some older adhesions. On opening the stomach and intestine, the masses of hair and string were found. That from the stomach is moulded to the shape of that viscus, which was much dilated; it occupied the larger portion of the greater extremity, a narrowed part projecting into the pylorus; very little solid food could have been taken latterly into the stomach, and little else than fluid would have passed by this mass into the duodenum. The mass consisted chiefly of long black hair and pieces of string rolled up and matted together with ingesta. It now measures, when dry, 6 inches in length, $3\frac{3}{4}$ in depth, and $2\frac{1}{2}$ across; but was much larger and heavier when first removed. The second mass has taken the shape of the lower portion of the duodenum and commencement of the jejunum, which were considerably dilated. This mass consists of much less hair, but a very large proportion of string; it is 14 inches in length, $2\frac{1}{2}$ inches in depth, and $2\frac{1}{4}$ broad in the thickest part. From the history of the case previous to the attendance of Dr. Blakeley Brown, it appears that she had been observed to put hairs into her mouth when only three or four years of age, but that her habits had not attracted any particular attention of late.

Dr. RISDON BENNETT presented a specimen of

Diseased and Malformed Aortic Valves.

A butler, aged sixty, was admitted into St. Thomas's Hospital, under the care of Dr. Bennett, on the 30th September. For six months he had been the subject of diarrhoea and other symptoms of functional derangement of the digestive system. The last week he had had cough. He was thin

and haggard in look. He referred all his uneasiness to the epigastrium and belly, which was swollen, but no fluctuation could be detected. The respiration was quiet, but he had cough, attended by tenacious, slightly sanguineous sputa; the skin was soft and cool; the pulse very feeble, somewhat quickened, and the tongue thickly coated with a moist brown fur. The resonance of the chest was much impaired on the right side, posteriorly below the scapula, and anteriorly beneath the clavicle; there was general deficiency of respiratory murmur, with small crepitation here and there. Subsequently the dulness increased very much, and the sputa became much more abundant and sanguineous, preserving the same tenacious character. He continued, however, to complain almost entirely of the uneasiness of the belly, and the respiration was never laboured nor much quickened. The heart's action was not attended by any bruit, nor, except very occasionally, was there any irregularity.

Post-mortem.—The lungs were emphysematous, and contained masses of coagula. The heart was much enlarged; the left ventricle thickened, dilated, and distended with coagulum. Besides the more ordinary coagula, there were entangled amongst the *earnæ columnæ* numerous small semi-organised clots, some of which were softened internally into a puriform fluid. The aortic valves were only two in number, and much diseased. The most anterior was extensively ossified, especially about its free margin, which, from one extremity to the other, formed a nodulated mass of bony matter about a quarter of an inch in thickness. It was perfectly rigid, and blocked up one half of the aortic orifice; the openings of the two coronary arteries were placed above this valve. The posterior valve was ossified, but to a less extent, the greatest amount being at the base, where were several large nodulated masses. The valve could move slightly, and was evidently capable of closing the orifice, though not of flapping back against the aorta, in which direction it could only move so far as to leave a narrow chink for the passage of blood. In the angle between the two valves to the right side was a small rudimentary third valve. The walls of the right ventricle were thicker than natural, and its cavity distended with coagulum. The auricles also were filled with coagulum. All the valves except the aortic were healthy. The only other morbid appearances worthy of notice were found in the lungs. These were very emphysematous, and contained large masses of pulmonary apoplexy.

Dr. W. T. GAIRDNER remarked, in refer-

ence to this case, that he was satisfied, after examining various specimens in different musea of disease affecting the so-called congenital malformation of aortic valves, that the presence of two instead of three valves was in many of the cases the result of disease and not of malformation, the disease being so situated as to separate from the aortic parietes the conjoined attachment of two valves, which constitute in consequence but one large deformed valve. A similar malformation may result from accidental injury, as illustrated in a case published by Dr. R. Quain, in the first volume of the Society's "Transactions." The traces of the original injury in these cases gradually disappear, partly from the cicatrization of the arterial wall, and partly from the increasing deformity of the valves, which become contracted and thickened. In many of the preparations, he (Dr. Gairdner) had found sufficiently distinct traces of the ulceration; in others they were less marked, amounting merely to a small white scar, situated about midway between the two insertions of the larger valve; in a third set of cases, no such evidence of laceration could be found, and he was willing to admit that some of them probably were real instances of congenital malformation. Most of these cases are examples of very old disease, in which the traces sought for, if they ever existed, might have disappeared. On the other hand, the congenital malformation usually presents (as remarked by Dr. Peacock) distinct traces of a smaller third valve, which is of course absent from those malformations which are the result of disease.

Dr. PEACOCK made the following report on

Malformations of the Semi-Lunar Valves.

The specimen exhibited by Dr. Bennett affords an example of the least frequent form of malformation by defect of the aortic valves. The valves are only two in number, and have interposed between them a small sac, forming the rudiment of a third. The circumference of the aortic orifice measures thirty-six French lines, and, of the two valves, that situated anteriorly measures sixteen lines in width; the other, or posterior, measures eighteen lines, and the small sac is two lines in width and three in depth. Both coronary arteries arise from the same sinus of Valsalva; that corresponding with the anterior valve, and the two vessels are much closer together than usual, being only twelve lines apart. From these observations it would appear, that the small sac must be regarded as the analogue of the right semi-lunar valve, the development of which, and of the corresponding portion of the circum-

ference of the aorta, has been arrested, so that neither has the valve assumed its proper dimensions, nor acquired its natural relations to the coronary artery. From having had my attention directed to this case, I have been led to examine the various specimens of malformation of the semi-lunar valves of the aorta and pulmonary artery, contained in the musea of the Royal College of Surgeons, St. Thomas's, St. Bartholomew's and Guy's Hospitals, and in my own collection, and the cases of which I have taken notes amount to 50 in number. Of these, 41 are specimens of defective, and 9 of excessive development. Of the 41 cases, in 17 the valves have subsequently become the seat of such extensive disease, that their original condition cannot be easily or clearly ascertained, but of the remaining 24, with the exception of 3 or 4, which are so placed that they cannot be fully seen, all afford evidence that the orifices had originally been provided with three distinct valves. 1. In some of the cases the aperture is defended by a single valve, forming a diaphragm, protruded forwards in the course of the circulation so as to assume a funnel shape, and which displays on its upper side three distinct septa or fræna, dividing the same number of sacs, indicating its former divisions into three separate valves. This condition, though not often seen at the aortic orifice, is not infrequent at the pulmonic aperture. In the following diagram A shows this condition of the valves, as seen from the point when divided in B, the united valves seen from above (see next page).

2. In a second, and by far the more frequent form of malformation, there exist two valves, and the defect in the number is apparently due to the adhesion of the contiguous sides of two of the valves, so that, in the process of development, they have become blended into one; the original separation being, however, still indicated by the disproportionate size of the united valve, by the existence of a septum dividing it more or less completely on the upper or aortic side, and generally also by a slight sulcus running across the ventricular aspect of the valve, from its attached margin to the free edge, and terminating in a small notch.

3. Of the third form, that in which the original triple condition of the valves is indicated by a small rudimentary valve interspersed between the two others, Dr. Bennett's case affords the only example which I have seen.

In addition to these forms of malformation, cases do occasionally occur, in which the aortic orifice is found to be provided with only two valves; the deficiency being however occasioned by the adhesion of two

FIG. 1.

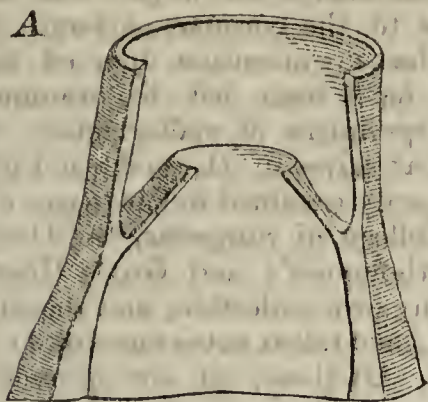


FIG. 2.

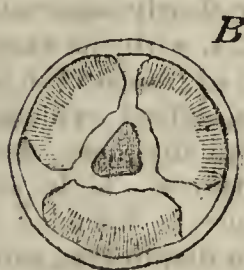


FIG. 3.

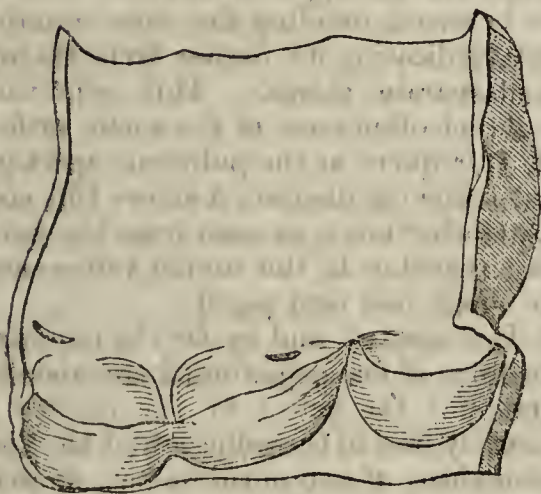
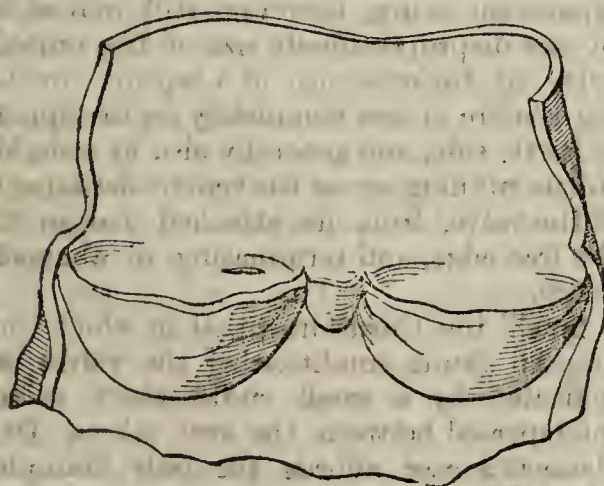


FIG. 4.



of the valves together from disease after birth, and the subsequent ulceration or atrophy of the septum so formed, or by the breaking down of the angle of attachment of two of the valves. Of the former

description, a preparation in the Museum of Guy's Hospital appears to afford an instance; and the latter condition existed in a specimen exhibited by Dr. R. Quam at the first meeting of the Society. In repeating that all the cases which I have examined, presented some sufficient proof of the originally triple form of the valves, I do not wish to extend the inference too far, and to deny that cases may occur in which no such evidence can be detected. For if, as we frequently see, especially when the defect is at the pulmonic orifice, and co-exists with other malformation, the two valves may be nearly of equal size, and the indications of the former division of one of them may be only traceable on very careful examination, or if, when a rudimentary valve exists, it may be so small and imperfect, as in the case exhibited by Dr. Bennett, we can readily understand that in some cases all traces of the original condition of the valves may disappear, though the mechanism of the malformation may have been precisely similar.

The term malformation is, however, as strictly applicable to the former class of cases as to the latter.

Of the forty-one cases of defect in the number of the valves, in nine the malformation existed at the pulmonic orifice, and in thirty-two at the aortic. In one case there were only two valves, both at the aortic and pulmonary apertures.

Defect in the number of the pulmonic valves, is generally attended with other serious malformations; and, consequently, is rarely seen except in young persons. When, on the contrary, the aortic valves are deficient in number, it is comparatively rare to find other co-existent malformation, and the persons in whom it is found are generally adults. This difference is explained by the greater relative importance of the pulmonic orifice during foetal life. No material deviation from the healthy state can then occur without the natural development of other parts of the heart being interfered with; for, if there be any obstruction, or the orifice be incapable of adapting itself to the increasing current of blood which it is required to transmit, those channels necessarily remain open which are natural only at the earlier periods of foetal life. The aortic orifice, on the contrary, is comparatively unemployed during foetal existence; and this, though it may conduce to the occurrence of cohesion of the valves, renders that condition of much less importance, so far as the development of the rest of the organ is concerned. When, however, the valves are defective at either orifice, the malformation, though unconnected with any other imperfection in the heart, is a powerful pre-

disposal to disease. Of the forty-one cases referred to, seventeen presented very aggravated disease of the valves, and, in very few of the others, could they be regarded as healthy.

I have before stated, that of the fifty cases of malformation of the semi-lunar valves which I have examined, nine were examples of excessive development. Of these, eight were cases in which the pulmonic valves were in excess, and in one only was there more than the natural number of valves at the aortic orifice.

1. In some cases the excess of the number of valves seems to be due to the division of one of them into two, such valves being smaller in size than the others.

2. In other cases there are three valves of nearly equal size, with a smaller supplementary valve interposed between two of them.

3. Occasionally the aperture is provided with four valves, gradually decreasing in size.

4. In yet other cases, there may be four valves of nearly equal size and natural form.

In the two first forms it is not unfrequently found that the division between the two portions of the one valve is not complete, or that the smaller supplementary valve communicates by an opening with one of the others; and it may be supposed that the excess in the number of the valves is due to the free fold of one of the valves having become adherent to the side of the aorta; but in the other cases it is not easy to offer any satisfactory explanation, so long as we are so imperfectly acquainted with the mode in which the semi-lunar valves are developed.

EPIDEMIOLOGICAL SOCIETY.

Dr. Babington, the President's, Address, read by him at the first Ordinary Meeting of the Second Session of the Society, held at the house of the Royal Medical and Chirurgical Society, 53, Berners Street, on Monday, Nov. 3d, 1851.

GENTLEMEN,—When I had the honour of addressing you from this chair at the first ordinary meeting of the Epidemiological Society in December last, I spoke of the origin of the Society, and of its progress up to that period.

For the information of those who were not present at that meeting, and who may desire to know more on the subject, I beg to refer them to the *Lancet* of Dec. 6th, 1850, where will be found the address as delivered by me on that occasion.

Part of the duty I have to perform on this the commencement of our second session—and, happily, under the same time-honoured, and to us hospitable roof—is, gentlemen, to give you a brief account of what the Society has done since it held its first ordinary meeting here.

A statement of this kind will not be without its utility in showing to yourselves and others that the tide of our undertaking is flowing on continuously and prosperously, as measured by the interesting matter brought forward at our monthly meetings; and, moreover, that we have an under-current at least equally strong in the more quiet but no less efficient working of our various committees.

On the 2d December, 1850, after I had concluded my Address, a paper by Dr. Bryson, on the "Infectious Origin and Propagation of Cholera" was in part read by that gentleman. At the second ordinary meeting, January 6th, 1851, the reading of Dr. Bryson's paper was concluded.

At the third ordinary meeting, Feb. 3d, a paper "On the Origin and Progress of Cholera in Guernsey," by Dr. Elliott Hoskins, was read by Dr. Gull.

At the fourth meeting, in March, Dr. M'William read a paper "On the recent Yellow Fever Epidemy in Brazil."

At the fifth meeting (April 7th) Mr. R. H. Cooke was present to read a paper "On the Epidemic Mental Diseases of Children;" but the meeting having resolved that the discussion on yellow fever should be continued during that evening, Mr. Cooke kindly consented to postpone the reading of his paper until the meeting in June.

At the sixth meeting of the Society (May 5th) the discussion on yellow fever was resumed; and, having continued longer than was anticipated, Dr. Snow, who began a paper "On the Mode of Propagation of Cholera," was obliged to defer its conclusion.

At the seventh meeting (June 3d) Mr. R. H. Cooke read his paper "On the Epidemic Diseases of Children," founded on Hecker's two pamphlets, the one entitled "Children's Pilgrimages," and the other "Sympathy." After which Dr. Snow finished his paper on Cholera.

At the eighth meeting (July 7th), Mr. Hunt read a paper "On the Use and Limits of Statistical Science, as applied to the Study of Epidemic Diseases."

At the ninth and last meeting of the Society (August 4th), a paper "On the Nature of Epidemics," by Mr. Grove, was read by Dr. M'William.

The reading of each of these papers was followed by a discussion; and reports and

abstracts of all the papers read at the Society's meetings have appeared in the London and Provincial medical journals.

The paper by Dr. Bryson, "On Cholera," and that by Dr. M'William, "On Yellow Fever," have each, by the permission of the Council, been published in the form of a pamphlet; and Dr. Bryson's paper being collated from official documents, it was necessary for him to obtain the sanction of the Lords of the Admiralty, which, I understand, was willingly granted prior to its publication.

Having thus presented you with a brief outline of the proceedings of the Society at the ordinary meetings, I feel bound to mention that, on each occasion, the members and visitors gave ample testimony of their sense of the value of the papers read before the Society. Gentlemen, it is to me a source of much regret that our utility is considerably lessened by the circumstance that the present state of its finances will not permit the Society to publish these valuable contributions. Let us hope that the time is not far distant when, by a more general interest manifested in our labours, and a corresponding increase in our resources, we shall be enabled to do so.

I may, however, state that, in the meantime, although there is a law of the Society, to the effect that all papers, after being read, shall become its property, the Council will not refuse to permit authors to publish them, either in the medical journals, or in a separate form.

While on this subject, I may add that a resolution of Council has been passed, that the discussion on any paper shall not be prolonged beyond the second night, as a contrary practice was found to interfere with the business of the Society.

As there may be present some of our members who have not seen the medical journals, in which, from time to time, the working of the Society has been noticed, I may state that the various committees formed for special purposes have been for some time steadily engaged in the performance of the duties they have respectively undertaken; and, with your permission, I will therefore say a few words respecting their projects.

The Committee on *Small-pox and Vaccination* have issued nearly one thousand printed forms of queries to hospitals and dispensaries, to union medical officers, and to other members of the profession in London and in the country. Besides these, about thirty copies have been transmitted through the Hon. the Board of Directors of the East India Company, to medical men officially employed in the three Presidencies of India. There have

been already received by the Secretary of the Committee 254 replies to the queries—a number considered sufficient to enable the Committee to proceed with their analysis without waiting for others that may come in. The Committee are, however, of opinion that at least 800 more forms might be very advantageously distributed, so soon as there are funds to cover the necessary expense.

The Common Lodging-houses Committee, for the purpose of investigating the condition of common lodging-houses, as influencing the propagation and spread of epidemic diseases, have distributed 250 forms of queries, to which a sufficient number of replies has been received to enable them to draw out a report, which has been already submitted to the Council.

The Hospitals Committee, or Committee to inquire into the epidemic diseases originating and prevailing in public hospitals, have held several meetings at the house of the Chairman, Dr. Addison, and have drawn up a tabular form of queries, which they propose sending to all the British hospitals. For this purpose they have applied to the Council for a grant of money.

The last committee that was formed is that styled the *Epizootic Committee*, its object being the investigation of those diseases which are found to prevail extensively among the lower, and more especially the domestic animals. The working of this Committee has been undertaken by Professor Symonds, of the Royal Veterinary College, who will be aided in his labours by gentlemen of the veterinary profession in London and in the provinces. Already several veterinary surgeons in the provinces have been announced as corresponding members of the Epidemiological Society.

In compliance with a desire expressed by Professor Symonds, that some members of the medical profession should unite with the veterinary members in carrying out the objects of the Epizootic Committee, several members of Council have already given in their names, to be placed upon that Committee.

As connected with these Committees, more especially with the "Common Lodging-houses" Committee, I must not forget a debt of gratitude we owe to some of the laity, members as well as non-members of the Society. The gentlemen of the City Mission readily tendered their valuable assistance to the Common Lodging-houses Committee, and greatly facilitated their inquiries regarding the influence which the receptacles of the lowest and most depraved portions of society exerted in originating and spreading epidemic disease. Valuable information, I am thankful to acknowledge,

has also been rendered to the Common Lodging-houses Committee by a lay member of the Society, Mr. Charles Cochrane,—distinguished, as we all know, for his philanthropic exertions in the cause of sanitary improvement.

To the medical journals the gratitude of the Society is eminently due, for the facility they have afforded to the honorary secretaries and secretaries of committees, in giving notices of meetings, publishing reports, and impressing the profession with the necessity of sending in answers to the queries issued by the respective committees.

The Editor of the "Veterinarian," in his Journal of September last, has dedicated a leading article to the Epidemiological Society.

Some important articles have also appeared in the Assurance Magazine, urging in strong terms the cause of the Society, and the benefits that must accrue to assurance societies by a due appreciation of those sanitary principles and laws which may be directed towards the investigation, not only of sweeping epidemics, such as cholera and influenza, but also of other diseases which are silently, constantly, and even more fatally operating to the destruction of human life.

The publicity given to the objects of the Epidemiological Society in the Assurance Magazine has procured for us a favourable notice in a German journal, the *Rundschau der Versicherungen*, edited by Herr E. A. Masins, of Leipsic.

To the General Board of Health, and to the Poor-law Board, the best thanks of the Society are due, for the permission given by these bodies to the members of the Small-pox Committee to have access to documents in their possession regarding the subject of small-pox; and to the Registrar-General we are greatly beholden for the facilities he has afforded us by the distribution of our papers among his subordinate officers.

For the information of those members of the laity who seldom, if ever, see the medical journals, I have much pleasure in stating that, at the nineteenth anniversary meeting of the Provincial Medical and Surgical Association, held at Brighton, in August last, Sir Charles Hastings, the founder of the Association, spoke highly of the objects and claims of the Epidemiological Society, and called upon the members of the Association to give it their warm support.

The field of inquiry open to this Society is not limited to Great Britain alone; for it comprehends all parts of Europe, and extends even to India—the cradle, so to speak, of epidemic diseases—and to every portion of the habitable globe.

Impressed with this view, and feeling the necessity of establishing communications with the various countries of Europe, and with foreign as well as with our own colonial possessions, a committee has for some time had under consideration the subject of the appointment of foreign secretaries. Some progress has already been made in their arrangements, and the list of secretaries will doubtless soon be completed.

From Bengal two important letters have been addressed to the President and Secretary of the Society, on the subject of Small-pox and Vaccination in India, by Mr. Bedford, a medical officer in the Company's service. A pamphlet by the same gentleman has more recently reached this country, in which the author submits some very important suggestions for the extension and perfection of vaccination simultaneously with the systematic study of epidemic and endemic diseases in India. I cannot, gentlemen, resist the temptation to read the following passage from this publication:—" 'Epidemic diffusion' is the most important medical question of the day, and can only be studied through systematic and parallel observation, conducted by a number of intelligent men working under one head. India, from its climatic peculiarities, and the nature of its 'Services,' offers, I hesitate not to affirm, the most magnificent field in the world for carrying out such a series of connected observations as may tend to elucidate the laws of the most terrible diseases which 'flesh is heir to;' and it will redound to her eternal honour to be in advance in such inquiries. So pressing has the question now become in Europe, that an Epidemiological Society has been formed for the special purpose of collecting information in regard to this class of disease."

Having thus, gentlemen, given you a hasty, and I fear but an imperfect sketch of the past proceedings of the Society, I feel it my duty before concluding to say a few words as to the future.

I have already alluded to our working committees, who are, so far as their means will admit, actively and zealously engaged in the prosecution of their respective inquiries; able and hearty co-operation is offered to the Society both at home and from abroad; and for so young an Institution it may be truly said, that, the Epidemiological Society has excited an unwonted degree of interest and sympathy among the lay, as well as the professional community. But, like other Societies not yet emerged from the infant state, our finances are not in a very flourishing condition.

The heavy outlay consequent upon the earlier meetings, and upon other means of

giving publicity to the existence of the Society; the expense of printing and distributing the rules and objects of the Society; of the printing and postage of the queries issued by the various committees, with other unavoidable sources of expenditure, have (notwithstanding the kind and courteous liberality of the Council of the Royal Medical and Chirurgical Society in granting us the gratuitous use of their rooms during the past and present session), exhausted the amount received in donations and subscriptions during the past year.

But there is no reason to despair. The active and enlightened benevolence of this country is not likely to turn aside from a Society whose labours, devoted as they are to the physical welfare of mankind, cannot be successfully prosecuted without influencing likewise their moral condition. We therefore rely much upon public feeling, and individual exertion, to induce others to join our ranks, and to aid us by pecuniary efforts.

Already have some public bodies given us substantial proofs of the interest they take in our cause, and when, by the publication of one or more of our Committee Reports, the attention of the Government, and of the Hon. the East India Company, shall have been more immediately called to the importance of the objects and aims of the Society, we may reasonably expect some assistance from those quarters in furtherance of the good work.

For ourselves we have only to do our duty by endeavouring so far as is in our power to accomplish the noble ends the Society has in view.

ACADEMY OF MEDICINE, PARIS.

Nov. 4, 1851.

Influence of the Manufacture and Use of Oxide of Zinc upon the Health of the Workmen.

M. CHEVALLIER read a report upon a work by Dr. Bouchut, having for its subject the hygiene of the new branch of industry in the preparation of oxide of zinc.

It is estimated that about fifty thousand persons in France are engaged in the manufacture and use of carbonate of lead: to these the complete substitution of oxide of zinc is matter of the first importance. In order fully to set forth the results of the researches to which the Commission had addressed itself, the reporter examines the subject under the following questions:—Is the manufacture of oxide of zinc attended with danger to the work-

men? Does oxide of zinc produce any dangerous consequences if taken internally? Has the oxide of zinc a poisonous action upon the lower animals? Have the soluble salts of zinc an action upon the economy different to that of the oxide?

In answer to the first question, it appears from M. Bouchut's work that the workmen have experienced certain accidents from the action of the oxide of zinc, but that these have been in no degree comparable with those arising from carbonate of lead.

The second question was answered in the negative.

The third question is not yet answered, being under the consideration of M. Landouzy. The report, however, states that the oxide undergoes solution before it is taken into the system, and that the salts of zinc exert a poisonous action; while at the same time the oxide given to patients does not appear to be dissolved in the organic fluids, since no poisonous action has followed.

The report states, with regard to the use of oxide of zinc in painting, that it is not attended with injurious effects in any degree comparable to those of the carbonate of lead.

Cultivation of Indigenous Opium.

M. AUBERGIER gave the result of the cultivation of poppy for the production of opium. The intrinsic value of the opium thus produced was influenced by several circumstances:—1. The proportion of morphia was less in proportion as the capsule was further from the state of exact maturity. 2. The several varieties of poppy yield an opium varying in the proportion of morphia they contain. These facts explain the diversities in the quality of different specimens of opium of commerce. The influence of climate on the proportion of morphia is very considerable—that of soil is less evident.

Physiological Action of the Interosseous Muscles of the Hand.

M. BOUVIER presented a dissected hand which showed that, according to the experiments of M. Duchenne, the interosseous muscles, instead of being attached only to the first phalanx, are prolonged to the second and third phalanges.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 13th November, 1851:—Robert Wilkinson, Bradford, Yorkshire.—James Joseph Cregeen, Ramsey, Isle of Man.

Hospital and Infirmary Reports.

ROYAL FREE HOSPITAL.

REPORTED BY MR. MILTON.

WE have selected the following cases from among many others, as they appeared to us most calculated to interest our readers, and also to offer, what is really the great object of these reports, a key to the practice pursued in the London Hospitals, so that those who are unable to visit them may be acquainted with all that is going on in these institutions; that they may learn the results of the trial of new remedies, the different operations pursued in the similar cases, or different modes of performing the same operation; the apparatus employed; the establishment of points of prognosis, diagnosis, and so forth.

With this view, cases have rather been chosen which bore on some line of treatment, and seemed to open up new sources of information; for after all, these splendid and extraordinary cases which occasionally attract so much attention, do not seem to us so much adapted to promote the progress of medicine and surgery, however interesting they may be to the pure physiologist. It is, in point of fact, those which present themselves under a familiar form, the details of which come home to every mind, that are important and useful to the practitioner. With this explanation of the reasons which have decided us in making our selection, we beg to continue our report of the Royal Free Hospital.

Ventral Hernia—Cured. Under Mr. GAY.

On the 17th of November, an old washerwoman living near this hospital was knocked down, when in a state of intoxication, by a cart which passed over her body. She was carried in a state of insensibility to this establishment.

When first seen she was pale and cold, and evidently suffering from the combined effects of the shock induced by the injury and the confusion of ideas arising from her previous state. A wound was observed on the scalp, and the last rib on the left side was fractured, of the pain from which she complained very much as soon as she was able to speak. Some ammonia draughts, and hot fomentations to the injured parts, were prescribed.

On the day after, it was found that she had vomited very much during the night; an occurrence easily explained by her being

in a state of inebriety, and having thus disordered her stomach, even had no influence been ascribed to the shock of her fall, and the blow on the head. But as these symptoms continued* and as it was now known that the cart had passed over her abdomen, this was carefully examined, and a large ventral hernia, nearly the size of an orange, was detected in the mesial line a little beneath the umbilicus. It was tense, and she complained of much pain in it. A pad with a broad bandage having been applied over the tumour, castor oil was freely administered with a view of unloading the bowels, which had not been opened since her entrance into the hospital.

The next day, however, it was found that she had had no sleep, and that the bowels, notwithstanding the administration of two ounces of castor oil, had not been relieved. There had been nausea in the night; the pulse was 114 and small, and the tongue slightly furred. She also complained of pain in the tumour.

Mr. Gay now reduced the hernia by taxis, and confined it by a concave tin cup and bandage, so as to exert but a very moderate, equable pressure on it, and do little more than prevent it from protruding further. This was followed up by the administration of a powerful enema, which brought away a quantity of lumpy fecal matter.

Complete relief followed these measures. The patient expressed herself better, the nausea disappeared, and she was once more able to sleep at night. No further untoward symptoms occurred; the bowels acted regularly, no medicines being required. On the 23rd, it was found on removing the bandage that very little protrusion of the bowel took place. Finally, on the 6th of December, scarcely three weeks from the date of admission, she was discharged perfectly cured.

Ventral hernia is rare, and the majority of the cases that do occur are above the umbilicus, and near the ensiform cartilage, the traumatic variety, and especially that below the umbilicus, being only very occasionally seen. Mr. Lawrence in his work on Hernia gives but few cases of it, and surgeons of very great experience have recorded but one instance or so of such

* "Without being strangulated they cause various symptoms, which are often referred to other sources, and can be cured only by discovering the true nature of the complaint. This will probably be accomplished by observing the inexplicable obstinacy of the symptoms, and attending to the rule of examining carefully all the ordinary seats of hernia in those affections in which the stomach and bowels are implicated."—Lawrence on Ruptures.

an accident. It is four or five years since Mr. Gay had a case of this kind to treat in the hospital, and this was produced by a very uncommon accident. A labourer was wheeling a barrow along a plank which connected the upper part of two houses. By some mischance the man fell, dragging the barrow along with him, and pitched with the right side of the abdomen on the handle of the barrow. He died in the hospital of other injuries received at the same time, and on examination a rupture of the oblique and transversalis muscles was discovered midway between the last rib and the crest of the ilium, with a protrusion of the gut and peritoneum between its edges. A very similar case seems to have occurred in the practice of M. Jules Cloquet.

Rare as it is, this accident might call for immediate treatment at the hands of any surgeon. The few cases recorded seem to establish the fact, that reduction is not so urgently required in this form of hernia, even when strangulated, and according to Mr. Lawrence "we are here to place more reliance on, and persevere longer in the use of clysters, purgatives, &c., than in the other varieties of rupture." But the treatment must ever depend, to some extent, on the urgency of the symptoms, and it is to be remembered, that though this hernia does not easily strangulate, yet still this may occur, and that patients have then perished in the very best hands.

Wound of the Rectum, Urethra, and Bladder—Cure. Under Mr. GAY.

Communications between the bladder and the surface of the body, or even the various outlets which lead to the surface, are, whether induced by violence or disease, of the highest interest, on account of the difficulty often experienced in healing them, the fistula and incontinence of urine which are apt to result, and the shock these injuries cause to the system at large.

The history of lithotomy, and of cases of stricture which have been operated on by incision of the urethra, show that when care is taken to conduct away at least the major portion of the urine, and to make such arrangements as to prevent its coming much in contact with the surfaces of the wound, there is but little danger of this not closing; and the following case, one of unusual severity, and yet terminating most favourably, opens out a prospect of cure even where great injury has been inflicted.

W. B., a man aged 32, was brought into the Royal Free Hospital with a wound of the right side of the rectum, connected with the bladder and urethra. He had fallen from a height on an iron spike, which had penetrated the membranous portion of

the urethra, lacerated the bladder, and finally entered the rectum.

As he was very much collapsed, warm water and brandy were given him immediately, and cloths dipped in cold saturnine lotions were applied round the wound. On the succeeding day it was ascertained that he had been very restless and uneasy, but still free from pain. Urine mixed with blood passed through the wound, some also escaping from the urethra. It did not, however, drain away, being only expelled when the bladder contracted to expel the fluid. On attempting to pass a catheter into the bladder it at once presented at the orifice made in the membranous part of the urethra, and from thence passed into the rectum.

The lotion was continued, a moderate diet ordered, and, as the bowels were confined, purgative draughts till they were freely opened were prescribed. The catheter was passed down to the wound, and the orifice of the further portion of the canal having been discovered after some search, the instrument was carried on to the bladder. Be it observed, however, that the canal was not torn in two, but that such a degree of continuity was preserved, that with the swelling of the wound some fluid always passed by the *meatus urinarius*.

The succeeding night was restless from pain in the wound, and especially when he coughed. The water passed away by both outlets much as before, and the perineum and one side of the rectum were swollen and painful on pressure. The pulse was 90 and rather full, but there was no thirst. Twenty leeches were applied to the part, and a saline draught ordered to be taken every four hours.

The report now goes on merely to state progressive but slow improvement, till the thirteenth day after admission, when an attack of spasmodic stricture caused the urine to be retained fifteen hours, the wound having now so closed and swelled as to allow of little being expelled by the perineum. He had been latterly treated with salines to relieve the feverishness, and some compound tincture of camphor to allay the cough under which he laboured. Sedatives had, however, occasionally to be resorted to in order that sleep might be procured.

Four days later it was observed that the wound in the perineum was to all appearance firmly closed. No water had passed through it since the last date, all the urine finding a free exit by the urethra. Pain and throbbing, however, still continued in the perineum, for which leeches were again ordered.

Soon after this, obstinate constipation of the bowels set in, and was followed by a much more unfavourable state of

health, being accompanied by headache, sickness, and other unpromising symptoms; enemata of warm water, followed up by large doses of colocynth and scammony, were freely resorted to, and as they failed to act, recourse was had to purgative clysters, which soon produced some copious stools, and arrested the more threatening phenomena.

But this rescue from an alarming complication had like to have been followed by serious results; for on the day after, it was found that he could not pass his water, owing to the obstruction caused by some of the gruel, which had, in giving the injection, again forced the wound somewhat open, and made its way into the urethra.

This was removed with great care; quinine and mild aperients were ordered; the opening soon closed; and the patient was discharged cured.

Phlegmonous Erysipelas — Treatment by Incision — Cure.

The bad success which has on many occasions attended the treatment of erysipelas by the ordinary remedies, the difficulty of arresting its progress, and of preventing the constitution from sinking under its deleterious effects, have induced some surgeons to make free incisions into the inflamed part; and not a few are disposed to regard this, not as a last resource, but as the sheet-anchor of treatment,—the one thing which must be resorted to from the very first. As incisions at once unload the vessels, and relieve their high state of congestion and tension, and thus act in many instances most beneficially on the progress of the disease, it becomes advisable to examine carefully what cases admit of being treated in this way.

However desirable it might be to substitute simple medicines and unirritating applications for long incisions almost as large as sabre wounds, yet few, we think, will be disposed to deny, that if their efficacy can be proved, it is much better to take refuge even in severe treatment, than to give the disease the most remote chance of carrying off the patient. In the following case it will be seen that the disease had made considerable progress before the patient was admitted into the hospital, and yet that the beneficial effects of incision were striking and immediate.

T. G. S., a stout man, aged 46, who had once been a grocer, and in very good circumstances, but now wandering about without a roof to shelter him, was admitted into the Royal Free Hospital, Sept. 19th, 1850, with phlegmonous erysipelas of the left leg. The limb was enormously swelled, and of a bright red colour from the foot

half way up the thigh; the calf measured three inches more in circumference than that of the other leg. The swelling pitted deeply on pressure, and around the knee the cuticle was elevated in several places by a crop of vesicles. The tongue was moist and abnormally red, except about the right edge, which was covered with a thick white fur; the pulse was 90, and soft.

He states that about a week previous to entering the hospital he walked to Barnet: this was soon followed by considerable tenderness in the inguinal region of the left side, which afterwards swelled. The following day the leg began to swell, and increased in size up to about two days ago, becoming at the same time inflamed and painful. Since that time the swelling has in the patient's opinion not increased, but the redness has become considerably more vivid.

About 15 years ago he had typhus fever, accompanied by considerable swelling of the left leg. The fever left him at the expiration of the 15th week, but the limb remained engorged and much larger for eight weeks after, though it ultimately returned to what appeared to him a perfectly healthy state. Four years later he had two consecutive attacks of rheumatic fever. He recovered perfectly, and remained in a good state of health till the present March.

His habits were not over and above temperate: notwithstanding his destitute state he has generally contrived to drink two or three pints of porter a day, and occasionally he has been able to add a glass or two of gin to this. Now and then brighter days, or meetings with old friends, have enabled him to relieve the monotony of this routine by getting drunk.

An incision about four inches in length was made along the outer side of the leg. Free bleeding took place, two or three large veins which had been divided pouring out blood in a full stream. About a pint was permitted to flow away, when further bleeding was stopped by raising the limb, and applying cloths dipped in cold water.

Mr. Gay then prescribed a saline draught every four hours, containing tartrate of antimony and a drachm of sulphate of magnesia in each dose. The inflamed surface was covered with cloths dipped in acetate of lead lotion, and a pill was ordered for bedtime, containing two grains of calomel and one of opium.

At 8 P.M. he was again seen. There had been no further bleeding; the pulse was 100, and quiet; he was drowsy, but prevented from sleeping by shooting pains near the wound. His bowels had been moved, and several dark, loose, and very offensive stools came away, preceded by

gripping pains in the abdomen. He was therefore directed to take the pill.

On the following day there was considerable improvement; the limb was lessened in size, and the colour had faded; the pulse was 92, and tranquil, and the patient felt much better. He was now ordered a milk diet, and to continue the saline draughts without the sulphate of magnesia; a little Hydrarg. c. Cretâ was substituted for the calomel at bed-time.

The next day it was found on visiting him that he had passed a somewhat restless night, although a grain of opium had been added to the Hyd. c. Cretâ. He complained a good deal of pain in the leg, which disturbed him, though he said it was but slight. There seemed some diarrhoea impending, as his bowels had been opened four times without any aperient having been used; the stools were less dark and offensive, but attended with some gripping pain. Twenty minims of Tinct. Opii, with an ounce of the rhubarb mixture of the hospital, were directed to be taken every four hours, and light pudding allowed.

This soon relieved him, as, though the gripping pains continued for a day or two, the bowels speedily became more quiet. His tongue grew cleaner, the pulse fell to 86, and all the pain about the wound gave way.

From this time regular and uninterrupted progress was observable every day. The Hydrarg. c. Cretâ was ordered each night, the dose of the opium being diminished to gr. ss. The compound Spirit of Sulph. Ether, with Tincture of Hyoscyamus, were employed, in combination with Nitrate of Potass, to relieve the feverishness and disordered state of the stomach, and at the same time give a mild stimulus to a shattered constitution. These, and the use of effervescent draughts, soon relieved the constitutional symptoms. The wound in the leg began to close up by granulation, and the limb grew steadily paler and lost bulk, and a week after his admission nothing remained to combat but the weakness.

Better diet was therefore ordered, and as this agreed with him, half a pint of porter was added to it.

On the 5th of October the quantity of porter was increased, and meat diet allowed. Bark and acids took the place of salines, and iodine ointment was rubbed in to dissipate the little swelling which still lingered in the limb. The case went on steadily, and the patient gained so much strength that on the 5th of November he was discharged cured.

HOSPITAL AT STUTGARD.

Case of Resection of the Ulna for Osteosarcosis. By Dr. LESSER.

E. KRALHMER, a servant-girl, aged nineteen years; had not menstruated; of a chlorotic aspect, and feeble constitution; unexpectedly discovered a tumour on the upper extremity of the right ulna, which she attributed to a blow. At first a small painful tumour, it increased rapidly. It was regarded by a medical man who had occasionally seen it during two or three years as being simple enlargement of the bone. At a later examination it was found that a considerable tumour was seated on the posterior aspect of the elbow-joint, smooth on its surface, about three inches broad by four inches in length: the integuments covering it were not adherent, and healthy, with the exception of a varicose state of their veins. By the application of heat, by touch, or pressure, pain was excited. The radial aspect of the ulna was soft and elastic. The posterior aspect of the bone, traced by the finger, was found to be healthy. The radius was free from disease, and unconnected with the tumour. The extension of the morbid growth anteriorly caused some separation of the ulna, and produced difficulty in the movements of the joint. The patient's general health was not in any way disturbed.

With regard to diagnosis, it was not easy to determine whether the disease was *osteosclerosis*, *osteosteatoma*, *osteosarcoma*, or *fungus medullaris*. Against the latter opinion were, the absence of irregularities of the surface; its dissimilar consistence; the want of fluctuation and softening; the absence of severe local pain, and of ulceration having the fungoid characters; as also of the general sinking of the constitutional powers usually attendant upon malignant disease, and which would probably have terminated the patient's life within the period that this disease had lasted. Osteosclerosis could have been recognised by the hand; its general ivory-like hardness would have differed from the softness and elasticity which this tumour presented in some parts. The two other forms of disease of the bone which were suggested were not so readily distinguishable from one another, as much information with regard to their intimate structure is yet wanting. The tumour in question presented many of the symptoms described by authors as those of *osteosteatoma* and of *sarcoma*; the greater hardness, however, of the former, and its frequent occurrence in the heads of bones where the latter is seldom developed, toge-

ther with the softness and elasticity of some portions of the tumour, led to the diagnosis of osteosteatomia of the ulna. While the general health remained unimpaired, the prognosis as to the local evil was favourable, and any active interference might be attended with some injurious effects on the constitution. It was determined that the growth should be removed, since in its ordinary course ulceration might take place, with accompanying hectic fever, which would at last terminate the patient's life. The choice, then, remained to be made between amputation of the humerus, which was proposed, and partial resection of the ulna. The decision was made in favour of the latter, as it had been ascertained that the ulna alone was affected, and because it appeared probable that after its removal the poor girl would retain considerable use of the joint. It was not concealed that resection, and especially the decapitation here proposed, would make a more powerful impression upon the system than amputation, for which it was substituted; that both these operations had been uncertainly attended with success; and that the precise mode of its performance could not be determined beforehand, as the whole operation might be changed by the occurrence of some untoward circumstance.

The operation was performed in the following manner on the 6th of July, 1850:—The patient having been brought under the influence of chloroform, two incisions of equal length, extending an inch and a half above, and four inches and a half below the elbow-joint,—one on the outer side of the ulna, the other over the radius,—both united by a transverse incision across the joint, thus forming two flaps, by which the entire morbid growth could be exposed to view. The tumour was situated on the radial aspect of the enlarged ulna, below the joint, filling up the interosseous space. The second step of the operation consisted in the detachment of the tumour, and the separation of the muscles from their attachments to the ulna. An incision carried over the middle of the tumour showed a degeneration of the muscles, tendons, and fibrous tissues; the morbid growth was isolated from these, partly with the chisel, and partly with the knife; as also was its attachment to the periosteum of the radius, from which it was separated without inflicting any injury upon that tissue. The muscles on the outer aspect of the ulna were then divided from their attachments, and the disease itself isolated. The third step consisted in the removal of the growth. In order to ascertain its internal characters, two thin slices were removed with a fine saw from its posterior surface: it was found that it contained medullary cells presenting

a denser structure than bone usually exhibits, whence it presented the appearance of ivory. A spatula being passed under the ulna, it was cut through with a phalangeal saw: the same manœuvre was repeated at its upper part; here, however, the saw encountered an obstacle, and it was necessary to have recourse to the hammer and chisel; as the upper end of the bone was then also found to be implicated in the disease, it was removed after the olecranon had been brought into sight, and the bone dislocated: the attachments of the triceps muscle were divided, as well as its ligaments and capsule. One artery was tied. The surfaces of the wound were cleansed, and the flaps brought together and united by sutures. The patient was an hour and a half under the influence of chloroform.

The diseased portion of bone, three and a half inches in length, exhibited an absence of periosteum: it was considerably increased in size, and had at its thickest portion a diameter of an inch and a half. The foramina on its external aspect, through which the vessels pass, were enlarged: its internal surface was rough. Dr. Reinhardt, of Berlin, had examined thin slices of the growth under the microscope, and considered that the disease consisted of hypertrophy of the cortical substance, originating in chronic periostitis. At the same time it was evident, from the greater preponderance of osseous matter in the central portion of the diseased bone, that total osteosclerosis of the lower part of the resected bone had concurred with cortical sclerosis of the upper part.

The treatment of the wound presented nothing very particular beyond the following two occurrences, viz.:—Some sloughing of one of the flaps took place on the third day, followed by suppuration, which was not healed until the beginning of October; and the dislocation of the end of the radius, which took place on the seventh day, and recurred on the three succeeding days: the bone was easily replaced on each occasion. The latter accident was probably owing to the loss of the support of the capsular ligament. The repetition of the dislocation was prevented by the use of a cushion and splint, so applied as to keep the radius in position, and prevent it slipping over the smooth articular surface of the humerus. About the middle of August an attempt was observed to be taking place to fill up the space of the removed bone by a deposition of callus; and by the time the wound was perfectly healed, a hard mass had entirely replaced the bone. The consequence of this was an ankylosis between ulna, radius, and the articular surface of the humerus, which interfered with the flexion

and extension of the limb. This impediment was after some time overcome by frictions and passive movement of the joint, so that the patient is now able to make considerable use of the limb, with a prospect of daily gaining the strength and utility of the joint.

CLINIQUE DES DEPARTEMENTS.

Case of Traumatic Necrosis of the Parietal Bone;—Double Intra- and Extra-cranial Abscess;—Application of the Trephine;—Cure. Under the care of Dr. CARVILLE, Surgeon of the Maison Centrale at Gaillon.

ALPHONSE P—, aged twenty-four years, of a good constitution, and of a mixed temperament was received into the prison at the age of twenty-one years: he there lost his health through severe and repeated punishments: he became scorbutic, his stomach and bowels disordered in their functions. With this impaired state of health, in 1849 he fell with violence upon his head, producing dizziness, &c., but not causing a solution of continuity, merely an echymosis about the size of a pigeon's egg over the parietal prominence: this tumour remained for about a year, neither hard nor soft, but painful; at the end of a year it became soft in the centre, and increased in size. From this time the patient complained of shooting pains over the head, and manifested signs of compression; these symptoms became worse, and from time to time he experienced startings of the limbs, great feebleness, especially towards evening, and at night he was constantly disturbed by painful dreams. His general health failed, a febrile state occurred every evening; the tumour was of the size of an egg, fluctuating, and in the centre yielded to pressure, a hard circular ring being detectable at the base. The tumour was opened freely, and about half a pint of pus escaped. The bone was found to be necrosed, but the sequestrum was firm. The wound was dilated with sponge tents: a portion of bone about the size of a franc piece was seen to be dead, but firmly attached. On examining this portion of bone closely by means of strong light, the bone was found riddled by minute apertures, through which pus oozed synchronously with the action of the heart. This phenomenon explained the cessation of the signs of compression when the abscess was opened, and also left it evident that a collection of pus existed between the dura mater and the bone. The wound was kept open by sponge tents for three months, to

afford opportunity of watching the state of the bone: at the end of that time it was found that the apertures of the bone were filled with wax from the sponge tents, while pus was seen oozing from around the margin of the dead portion, where separation was seen to be taking place, and a circular fosse was observed, becoming deeper day by day. It was determined to remove the sequestrum: this was done with the crown of a trephine. The wound was filled up by granulations in about fifteen days: thus nature's own process was anticipated, and the cure completed without any drawback.

Correspondence.

THE NORWICH CONSULTATION CASE—
MR. COOPER'S REPLY.

[We have received a long letter and postscript in reference to this case from Mr. Cooper. We insert those parts of the letter which have a bearing on the *comments* appended to the original correspondence by Dr. Murphy. On all other points it is desirable that the members of the profession should be allowed to form their opinion from a perusal of the entire correspondence. Had our contemporary, the *Lancet*, acted fairly by Dr. Murphy, in inserting the whole of his explanatory letter, with the documents referred to at page 775 of our number of Oct. 31, we should have taken no notice of the subject, nor would it have been necessary for Dr. Murphy to appeal to our columns for that justice which he did not meet with elsewhere. The correspondence was not allowed to be continued in the *Lancet* so far as Dr. Murphy was concerned, but was subsequently reopened in favour of Dr. Ranking, when Dr. Murphy was made a subject of attack. Is this to be considered fair-play? Our own opinion is that the whole affair is the result of an unfortunate misunderstanding between Dr. Murphy and Mr. Cooper, and that this has been fomented by individuals who ought to have been actuated by better motives. It is our further belief that *there is not the slightest ground for imputing to Mr. Cooper improper management of the lady in a previous confinement*. We certainly did not understand Dr. Murphy's certificate in that light, and Dr. Murphy has himself disclaimed any such intention in giving it.]

SIR,—Permit me to occupy a small space in your columns briefly to allude to

the correspondence which appeared in your number of October 31st, on the subject of "the Norwich Consultation."

Dr. Murphy, in justification of the course he has pursued, has placed to my account a series of charges to which I can in no way plead guilty. He says that I evidenced no desire to obtain from him an explanation of the opinion he gave, but that I made it a cause for an unjustifiable attack on him; that I misrepresented and misapprehended the nature of his certificate; that I desired to convict him of an obvious pathological blunder, and to bring him unwarrantably before the professional public; also that I obtained the collective opinions of my professional brethren by placing before them what was not the question. To these imputations I would reply as concisely as possible. To the first count, I need do no more than refer you to the correspondence, and more particularly to my letter, No. 2, of May 5th, wherein I propounded to him certain questions, and begged him to reconsider his opinion; these questions it will be seen in his reply, he declines to answer in the following words:—"You will pardon me if I decline to enter upon a discussion on the other points touched upon in your letter." He also states in his correspondence with Dr. Ranking, and in his defence at the Medical Society, that he was not made acquainted with the subsequent facts of the case. The same letter to which I have before referred, conveyed to him all the information he has subsequently obtained from Dr. Ranking, and would have enabled him *then* as well as now to judge correctly of the case; it will be seen, I put him in possession of the blighted embryo being expelled. * * *

As to my desire to convict him of a pathological blunder, whatever notion he might intend his certificate should convey, the application of the imperfect tense "*became* thus disorganized," could admit of no other meaning than that a portion of *healthy* placenta being retained became disorganised. The inference which has been drawn by all parties as to the literal meaning of his opinion, is to my mind still further confirmed, by an expression used in his reply to my second letter—"that he thought it probable the retained portion *became* the nucleus of *future* disease."

There are a few other points in his correspondence with Dr. Ranking that I feel it necessary for me to notice. He says, "that I did not wait his reply, but hastened up to London, and regrets that I did not think proper to call upon him, and that my not doing so was a sufficient proof of the animus that guided me." My visit to London had no connection whatever with this matter, and until I had been there

some days I was perfectly unacquainted, and had nothing to do with the publication of the case in the *Lancet*, save indirectly by sending, *before* I left Norwich, the history of it to Dr. Lee for his opinion. When I *was* in town, Dr. Lee informed me of the case being about to be noticed publicly; and not receiving any satisfactory reply to any communications with Dr. Murphy, I considered it prudent to put an end to my private correspondence with him. Then I certainly did take means to obtain such other opinions as I deemed desirable, and attended two meetings of the Medical Society, expecting to hear there the explanation he refused to give me. In another part of his letter he says, "that the practical effect of his opinion was to reinstate me by the dismissal of Dr. Bell." He is here again at fault, for his written opinion was not conveyed to Mr Gladstone till the day after my attendance on the case had commenced; one of the reasons for my being so reinstated, was the loss of confidence in Dr. Bell by the alteration in the treatment made by Dr. Murphy. Mr. Gladstone requested Dr. Bell to propose a second visit from Dr. Murphy, to meet Dr. Copeman and myself, but this was refused, —for what reason it was not for me to judge; had this been accomplished I believe all the misunderstanding that has accrued would have been obviated.

In conclusion, I must again express my regret that Dr. Murphy should have attributed to me motives so unworthy, as I can assure him no feeling of animosity towards him actuated me in pursuance of the steps I felt compelled to take in justification of my own professional character. Apologizing for having troubled you at greater length than I intended,

I am, sir,
Your obedient servant,
WILLIAM COOPER.

Norwich, Nov. 8th, 1851.

P.S.—The foregoing letter was completed before your leading article of Friday last came under my notice. I cannot conceive, after the perusal of your lengthened defence of Dr. Murphy, that you can have been an *unbiassed* reader of the correspondence therein alluded to; and I am quite willing to leave the matter, after the attentive revision of that correspondence, in the hands of the profession generally. You have said that they have been misled by *fragmentary and ex-parte statements*. I would beg of you to point out in what single particular the profession are a whit the wiser from the publication of that correspondence, or what fresh light can have gleamed upon them in exculpation of Dr. Murphy. No other fact in the history of

the case has been elicited, and nothing with which they were not previously acquainted (through a faithful record of the history of the case in the pages of the *Lancet*) has been adduced in support of the opinion he gave. No one blames Dr. Murphy for having in ignorance met a homœopath; but every one must blame him for not having at once severed the connection when, through my first letter, he was made acquainted with the fact. It should be recollected that Dr. Murphy gave the certificate to Dr. Bell, after his (Dr. B.'s) dismissal from the case, and also after he knew that a physician here had previously refused to meet him.

The practical effect of that certificate, given into the hands it was, has been to injure my reputation, and placing it, bereft of connecting circumstances, before parties necessarily ignorant of such matters. Where is the mind it would not prejudice? I would ask you if I have evinced any warmth of feeling the circumstances did not render justifiable? The view I took of the opinion has been taken by a large class of the profession; the captiousness displayed has not been individual, but all but universal. I deny that Dr. Murphy gave his opinion—or rather, perhaps, I ought to say adhered to his opinion—upon “a *bonâ fide* statement of facts;” for he refused to take them from me, and with persevering tenacity depended upon the statements of the gentleman whom he describes as like many other respectable practitioners, nibbling at homœopathy but afraid to bite. It seems a matter of consideration with Dr. Murphy whether a man bites at homœopathy or only nibbles, and this may influence him in his consultations. The gentleman in question, however, is one of those prepared, where occasion serves, to adopt homœopathy in all its fulness, or to mingle with its purity an allopathic taint, thus running with the full and flowing tide of, or dabbling in, the stream which becomes

“Small by degrees and beautifully less,”

just as it may suit the caprice of his patient.

It would have been extraordinary had Dr. Murphy been aware that the case had already become a battle-field between two rival practitioners; for I knew nothing of, and had no quarrel with Dr. Bell before this certificate was given, save the broad line of distinction between a homœopath and an allopath separated us; and it is a subject for great praise that the unanimity of feeling prevailing on this point amongst the practitioners of Norwich was the main cause of Dr. Murphy's being summoned.

Selections from Journals.

LATENT PNEUMONIA. BY DR. LIMAN, OF BERLIN.

To Laennec, so far as we are aware, we owe the knowledge of *latent* pneumonia. He understood by that term the pneumonia that is developed in dying persons, that which accompanies certain forms of epidemic catarrh, and the inflammation of the lungs, which is a symptom in some eruptive and continued fevers. This epithet was applied by Laennec, because, under such circumstances, the rational signs are usually absent, and the disease is only discovered by close examination. If this form of pneumonia be admitted, the above definition is evidently too narrow, since, on the one hand, lobular pneumonia must be placed in the same category, and, on the other hand, many cases occur under different circumstances from those mentioned by Laennec, in which the existence of the disease would not have been ascertained but for exploration by the physical method. It would be better, if this name is still to be employed, that it should be limited to such cases as supply neither rational nor physical signs whereon to found a sure diagnosis. The following case is an example of Laennec's *latent* pneumonia, which was not detected until late:—

S—, an unmarried woman, sixty years of age, was the subject of very frequent pains in the stomach. If she ate anything not easy of digestion, pain was produced. Very frequently, however, it would occur without any apparent cause. She had consulted many physicians, some of whom had exaggerated the nature of her disease, while others had regarded her symptoms as imaginary. Early one morning (February 15th) Dr. Liman was summoned to attend her, for what she called “inflammation of the bowels.” The patient was tossing about in bed, and pointed to the right hypochondrium as the seat of pain. Dr. Liman did not concur in the diagnosis. The bowels had not acted for 24 hours, although four enemata had been given. The abdomen was soft, not distended, slightly tender on deep pressure in the right hypochondrium. The tongue was dry; there was slight nausea, without vomiting; thirst; the skin not hot; the pulse but little more frequent than usual, small and regular; the head free from ailment; the attack had not begun with rigors. A full clyster was administered, at the same time that a spoonful of castor oil was taken, and the bowels then acted. The pulse rose, the skin began to perspire. At the patient's desire a consultation was

held. She continued to complain of the pain in the epigastrium, which was accompanied with nausea, and a painful sensation in the chest. The conclusion of every sentence she spoke was uttered in a kind of cry. The frequency of respiration was in about the usual relation to that of the pulse, of one to four. There was no cough. Her attendants observed that she would lie perfectly quiet an hour at a time, and that her speech at these times would be natural. The physician called in consultation considered the case to be one of hysteria, and accordingly prescribed an antispasmodic draught of Infusion of Valerian and Oil of Camomile. This caused suffusion of countenance, and increased the rapidity of the pulse to one hundred. The patient remained in the same state for many days, it being impossible to obtain any more definite indications of the seat of the disease. Any examination of the thoracic organs was obstinately refused. "I am suffocated" was the answer to the most precise questions with reference to the state of the respiratory organs. Six cupping-glasses were applied on the chest, and small doses of tartar emetic were administered. The condition of the patient remained as already described; the pulse soft and small; the skin moist; oppression at the epigastrium; no difficulty of breathing; no cough nor expectoration; general distress. Another physician was consulted, who also regarded the case as hysterical, and advised similar treatment. On the fifth day the patient complained of palpitations, sense of oppression in the region of the heart, nausea, pain in the right hypochondrium, with heat of skin. Four leeches on the præcordium gave some relief. A quarter of a grain of morphia, although repeated, did not induce sleep. On the following day the pulse was threadlike, the surface covered with a cold clammy sweat, and the patient seemed dying. She revived under the use of stimulants, but her cry was—"Kill me, I am suffocating." It was clear that it was impossible to proceed further without a thorough examination of the chest.

On the right side, from the fourth rib downwards, there was absence of resonance on percussion, and bronchial breathing. Dr. Liman prescribed *Liq. Ammon. Annisot.*, ten drops every two hours. The condition of the patient apparently improved; the pulse nearly natural; the breathing quiet; the expectoration was free, and of a greyish-green colour; the tongue was moist; there was less thirst; and sleep was easier. Towards morning, on the eighth or ninth day of the attack, the patient had slight rigors. From this time the medicine occasioned cramps of the stomach, as did also small doses of ipecacuanha, for which

they were exchanged. On the tenth day she put herself in a great passion, because, as she thought, her physicians did not visit her often enough. Her case did not seem immediately urgent, still less did it call for the attendance of three physicians. In the evening Dr. Liman found her in a state of great excitement, with hot skin, flushed countenance, and acute fever. She was unmanageable, tearing off the cold wet cloths applied to her head, and was extremely restless, expressing all the while a fear that she was going blind. Under these circumstances nothing could be done. After some persuasion, however, the patient became quiet, and fell asleep. On the following morning her pulse was 80. The other symptoms were not improved. In the afternoon slight convulsions occurred; she became insensible, put her hand repeatedly to her head, and during the night was delirious at intervals.

On the morning of the 27th she was unconscious, passing her stools involuntarily; the right side of the body was paralysed; the arms were flexed on the forearm; sensation was lost; the countenance anxious, the brows knit; the pupils contracted and motionless, deglutition difficult, the tongue dry, the mouth open, breathing stertorous, pulse 120. She continued in this state five days, and died on the 4th of March.

Sectio cadaveris.—The dura mater was adherent to the bone; the membranes congested; puriform effusion in the arachnoid, especially at the base of the brain; the substance of the brain much loaded with blood; all the ventricles contained pus and serum.

The right lung was adherent to the pleura; the surface of the diaphragm was thickly covered with lymph. The lower and middle lobes of the right lung were in a state of grey hepatization; the upper lobe œdematous. The right lung and the heart were healthy.

In the abdomen nothing morbid was found; but an abnormal position of the viscera was observed, produced by tight lacing.

Dr. Liman observes that this case should be placed in the category of Laennec's *latent pneumonia*. All the usual indications of an affection of the chest were wanting. The dissection showed an extent of disease little suspected. The morbid appearances referred the pain in the right side and epigastrium, to inflammation of the diaphragm: the same circumstance would also seem to account for a peculiar cry with which she finished every sentence after speaking for some time.—*Casper's Wochenschrift.*

CASE OF FRACTURED SKULL—APPLICATION OF THE TREPHINE—CURE. BY DR. MOREL, OF MAREVILLE (MEURTHE).

NICHOLAS P—, æt. 47, a labourer in a quarry, fell, on the 16th of April, from a rock, a height of about eleven yards; on some rough stones below. When seen by Dr. Morel, immediately after the accident, he was convulsed on the right side, the arm and leg being violently tossed about. The appearance of the patient was that of restlessness and stupor; his speech short, and interrupted by sighs. Consciousness was not entirely lost at first, but soon disappeared; he ceased to speak to or recognise any person; the respiration became laboured; the action of the heart was strong but irregular, and seemed to partake of the general convulsive state; the face was pale; the sensibility of the surface was lost; there was general coldness of the body, especially of the extremities; and the whole aspect of the patient was that of a person dying in convulsions. On examining the head, an extensive lacerated scalp-wound was found on the left parietal bone, which was observed to be depressed. The wound having been fully exposed, an attempt was made to elevate the fractured bone, but without success. It was then determined to trephine. While the instrument was sent for, a full bleeding from the left arm was practised. Several other injuries were also discovered: the side was much bruised; the spine of the scapula was fractured; and the glenoid neck of the bone was seriously injured, if not broken. The lower limb on the left side was turned outward, but no shortening was perceptible. The trephine was applied two hours after the accident. The crown of the instrument was placed on about two-thirds of parietal bone that offered a firm point of support: the operation, performed with great caution, lasted about twenty minutes.

The patient fell into a state of syncope, which excited some fear that he would die under the hands of the operator. The convulsions had ceased entirely, and the breathing had become stertorous. Seven fragments of bone were elevated, and the dura mater exposed to the extent of a diameter of about six lines, the bone having been comminuted by the fall.

When the compression was removed from the brain, the patient quickly recovered his consciousness: he remained for a short time in a state between waking and sleeping; warmth returned to the surface, and a slight tremor replaced the former convulsive movements of the right side. At the end of half an hour he spoke: he said that he had just awoke from a leaden slumber, in which he had had

painful dreams. The sensibility of the right side returned; he felt pain when it was attempted to move his left arm and leg, but the skin of the side was still insensible when pricked with a pin. The wound was simply dressed with a bandage and charpie. The movements of the brain were violent, and it was ascertained that the bone had not penetrated the brain. Constant irrigation was kept up on the wound. The arm and leg were also properly dressed, and placed in support. Leeches were applied behind the ears, and an enema administered.

With regard to the psychological phenomena, it was observed that the patient enjoyed all his intelligence; his feelings manifested themselves in the most tender manner; he consoled with his wife and family, and indeed talked so much that it was necessary to restrain him in conversation, and to interdict the visits of his friends, on account of the nervous character of his constitution.

Towards night the head became cold, and the countenance pale, and the left arm and leg were noticed to be occasionally jerked, as if from an electric shock. Another phenomenon was also observed later—this was, total blindness during forty-eight hours; the patient had not mentioned this, lest he should give pain to his friends. At midnight almost unbearable pain occurred in the right side, with epileptiform shocks of the whole body. The intellect was intact; the patient said that he felt the approach of death; he preserved his presence of mind, and consoled those around him. The convulsive movements increased in severity and frequency, without any impairment of the intellectual powers. M. Kayser, the *Interne*, who sat up with him during the night, made him inhale ether vapour, so as to keep him in a state of half-intoxication; the convulsions diminished, and towards morning the use of ether was discontinued, the leg only being slightly convulsed at long intervals; the pulse rose to 90, and became regular, strong, and full; the mind was clear; he experienced no headache; there were no signs of compression. The strictest silence was enjoined on the attendants, and everything was done to inspire the patient with confidence of recovery.

The progress of the case was favourable. In two or three days the wound began to suppurate; it was then washed with red wine, and dressed with styrax; the bowels were kept open by enemata; and infusion of the flowers of the Lime tree was administered. Six weeks after the accident two small fragments of exfoliated bone were removed. In about eight weeks the wound was healed; the patient was recovering the

use of his leg and arm, and might altogether be considered to be convalescent.

This case appeared to Dr. Morel to present a twofold interest with reference to the physiological and to the psychological functions. The latter were preserved entire, except during the few moments of compression, notwithstanding the severity of the injury; towards the fifteenth day only, a little irritability of temper was shown, and this originated in increased appetite; during eight days his appetite was larger than usual, but this degree of bulimia was not attended with any derangement of other functions, and ceased entirely at the end of that period.

The temperament of the patient was nervous, and although living among intemperate people he was a sober man,—a circumstance to which may be attributed his rapid recovery and freedom from delirium tremens. With reference to the injury which occurred to the lower extremity, it remained doubtful whether it consisted of fracture within the capsule, or mere contusion; most probably the former, the movements of rotation alone being still impaired. It was suggested that some injury to the spine, or extravasation of blood, took place in consequence of the fall: the history of the case, however,—its progress and perfect recovery—are opposed to this opinion. There could be no doubt, Dr. Morel observes, that the use of the trephine rescued the patient from death by convulsions,—the result of the compression of the brain by the fractured bone.

MEDICAL BENEVOLENT COLLEGE.

At a meeting of medical men, held at Kentish Town on the 11th inst., it was resolved,—

“That every effort ought to be made by the profession to support Mr. Propert in his noble undertaking of establishing a Medical Benevolent College.

“That a committee of medical men be at once formed to aid him in that good work. And

“That the best thanks of the meeting be given to Mr. Propert for his generous efforts for the good of the profession.”

ROYAL COLLEGE OF SURGEONS.

THE following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at the meeting of the Court of Examiners on the 7th inst.:—Messrs. R. Bowman—W. Haughton—J. B. Paterson—H. S. Colston—J. W. Howard—J. Wills—W. T. Coleby—W. Robinson—W. W. Harris. On the 14th inst.:—Messrs. E. R. Prance—J. E. Tuxford—J. Collie—J. W. Eastwood—W. E. Day—J. M.

Roche—C. Chibnell.—At the same meeting of the Court, Mr. James Wilkinson Elliott passed his examination for naval surgeon: this gentleman had previously been admitted a member of the College, his diploma bearing date November 19, 1847.

BIRTHS & DEATHS IN THE METROPOLIS During the Week ending Saturday, Nov. 15.

| BIRTHS. | | DEATHS. | |
|------------|------|-----------|------|
| Males..... | 814 | Males.... | 529 |
| Females.. | 712 | Females.. | 493 |
| | 1526 | | 1022 |

CAUSES OF DEATH.

| | |
|--|------|
| ALL CAUSES | 1022 |
| SPECIFIED CAUSES | 1015 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 236 |
| <i>Sporadic Diseases, viz.—</i> | |
| 1. Dropsy, Cancer, &c. | 55 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 110 |
| 4. Heart and Bloodvessels. | 45 |
| 5. Lungs and organs of Respiration | 168 |
| 6. Stomach, Liver, &c. | 62 |
| 7. Diseases of the Kidneys, &c. | 14 |
| 8. Childbirth, Diseases of Uterus, &c. | 5 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 8 |
| 10. Skin..... | 8 |
| 11. Premature Birth | 0 |
| 12. Old Age | 47 |
| 13. Sudden Deaths..... | 3 |
| 14. Violence, Privation, Cold, &c.... | 26 |

The following is a selection of the numbers of Deaths from the most important special causes:

| | | | |
|--------------------|----|------------------|-----|
| Small-pox..... | 23 | Convulsions..... | 37 |
| Measles..... | 15 | Bronchitis | 66 |
| Scarlatina | 43 | Pneumonia | 68 |
| Hooping-cough | 22 | Phthisis | 123 |
| Diarrhœa..... | 26 | Lungs | 9 |
| Cholera..... | 0 | Teething | 11 |
| Typhus..... | 58 | Stomach | 7 |
| Dropsy | 15 | Liver..... | 11 |
| Hydrocephalus | 37 | Childbirth | 4 |
| Apoplexy | 27 | Uterus | 1 |
| Paralysis | 20 | | |

REMARKS.—The total number of deaths was 31 above the average mortality of the 46th week of ten previous years.

METEOROLOGICAL SUMMARY.

| | |
|---|-------|
| Mean Height of the Barometer | 29.96 |
| " " " Thermometer ^a | 40.2 |
| Self-registering do. ^b Max. 0.0 Min. 20 | |

^a From 12 observations daily. ^b Sun.

RAIN, in inches, .20. — Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was nearly 3° below the mean of the month.

NOTICES TO CORRESPONDENTS.

We have to acknowledge the receipt of communications from Mr. B. W. Richardson, Mr. Sandys, Mr. N. Ward, and Dr. C. H. Jones. Various papers, which are in type, are unavoidably postponed until next week.

MEDICAL BENEVOLENT COLLEGE.

Established June 25th, 1851.

IN placing before the Profession the First List of Contributors to this National undertaking, the Council have to congratulate the Members on the very satisfactory results of their labours. They, however, earnestly call upon those who have not already subscribed, to come forward as early as possible, in order to convince the Public, to whom an urgent appeal will shortly be made, that they are fully sensible of the great want of such an Asylum for their less fortunate Brethren, or their Widows, in the evening of life: they would, also, urge upon the Profession the importance of personal exertion to promote the accomplishment of so laudable an object.

Subscribers to the Medical Benevolent College.

| | £ | s. | d. |
|--|----|----|----|
| THE RIGHT HONOURABLE THE EARL MANVERS | 52 | 10 | 0 |
| THE RIGHT HON. AND RIGHT REV. THE LORD BISHOP OF LONDON .. | 21 | 0 | 0 |
| THE RIGHT REVEREND THE LORD BISHOP OF DURHAM | 50 | 0 | 0 |
| THE RIGHT REVEREND THE LORD BISHOP OF RIPON..... | 20 | 0 | 0 |
| <hr/> | | | |
| Andrews, Mrs. Gloucester place | 21 | 0 | 0 |
| Arden, Richard E. Esq. | 10 | 10 | 0 |
| A Friend, by Lady F. Watson | 5 | 5 | 0 |
| Angus, Alex. Frith street, Soho | 1 | 1 | 0 |
| Andrews, Miss, Gloucester place | 1 | 1 | 0 |
| Atkins, Dr. Stoke Newington (annual) .. | 1 | 1 | 0 |
| Aitkin, D. M. Esq..... | 1 | 1 | 0 |
| A Friend, Birmingham | 1 | 0 | 0 |
| Appleton, Dr. Curzon street | 1 | 0 | 0 |
| Atkinson, C. J. Esq. M.D. Westminster | 3 | 3 | 0 |
| Ditto ditto (annual) .. | 1 | 1 | 0 |
| A Grateful Invalid..... | 0 | 13 | 9 |
| Amey, Thomas, Esq. Ebury st. Pimlico | 0 | 10 | 6 |
| A Pup'l of Lane's School..... | 0 | 10 | 6 |
| A Friend, by Miss C..... | 5 | 0 | 0 |
| Amedroz, Mrs. Blandford square..... | 0 | 10 | 0 |
| A Well-wisher..... | 0 | 10 | 0 |
| Allan, Peter, M.D. Bridport | 1 | 0 | 0 |
| Alston, T. B. Esq. | 0 | 10 | 0 |
| Allport, the Misses, and Friends, Cam- | 2 | 2 | 0 |
| berwell | | | |
| Bullen, Francis, Esq. Farringdon street | 50 | 0 | 0 |
| Bentley, J. Esq. Bartholomew's hospital | 21 | 0 | 0 |
| Beckett, T. Esq. Russell pl., Fitzroy sq. | 20 | 0 | 0 |
| Baring, John, Esq. Oakwood, Chichester | 20 | 0 | 0 |
| Beaman, G. Esq. King st. Covent garden | 10 | 10 | 0 |
| Ditto ditto annual .. | 2 | 2 | 0 |
| Bennett, Dr. Henry, Cambridge square | 10 | 10 | 0 |
| Bird, Dr. Golding, Russell square | 10 | 10 | 0 |
| Batteley and Watts, Messrs. | 10 | 10 | 0 |
| Burfoot, Mrs. Welbeck street | 10 | 10 | 0 |
| Bush, J. Esq. Clapham..... | 10 | 0 | 0 |
| Browne, R. Wilson, Esq. Bath..... | 10 | 0 | 0 |
| Blamire, Mrs. Upper Harley street.... | 10 | 0 | 0 |
| Ballard, Thomas, Esq. Southwick place | 5 | 5 | 0 |
| Barnett, A. Esq. M.B. Commercial road | 5 | 5 | 0 |
| Brown, I. Baker, Esq. Oxford square.. | 5 | 5 | 0 |
| Brown, Robert, Esq. Brixton hill..... | 5 | 5 | 0 |
| Ditto ditto annual .. | 1 | 1 | 0 |
| Baker, E. Esq. Lion House, Stamford | | | |
| hill..... annual .. | 2 | 2 | 0 |
| Babington, Dr. George street | 5 | 5 | 0 |
| Bacot, J. Esq. Portugal st. Grosvenor sq. | 5 | 5 | 0 |
| Becker, Mrs. Green park buildings, Bath | 5 | 5 | 0 |
| Brayne, Robert, Esq. Banbury..... | 5 | 0 | 0 |
| Ditto ditto annual .. | 1 | 1 | 0 |
| Barnett, R. C. Esq. Chester terrace.... | 5 | 0 | 0 |
| Bird, Dr. James, Hyde park sq. (ann.) | 3 | 3 | 0 |
| Beattie, Dr. Tavistock street | 3 | 3 | 0 |
| Brown, Thomas, Esq. St. Mary Axe .. | 2 | 2 | 0 |
| Ditto ditto annual .. | 1 | 1 | 0 |
| Bull, Dr. Hereford..... | 2 | 2 | 0 |
| Ditto ditto annual .. | 1 | 1 | 0 |
| Brunskill, Henry, Esq. Eccleton place | 2 | 2 | 0 |
| Burke, P. Esq. Upper Montague street | 2 | 2 | 0 |
| Blackstone, J. Esq. Park house, Glou- | | | |
| cester gate | 2 | 2 | 0 |
| Bartlett, Wm. Esq. Notting hill | 1 | 1 | 0 |
| Barker, Dr. Bedford..... annual .. | 1 | 1 | 0 |
| Berncastle, Dr. 80, Albany st. .. annual | 1 | 1 | 0 |
| Bleeck, Chas. Esq. Warminster | 5 | 5 | 0 |
| Ditto ditto annual .. | 2 | 2 | 6 |
| Brooke, Charles, Esq. 29, Keppel street | 1 | 1 | 0 |
| Brooke, Mrs. | 1 | 1 | 0 |
| Bonney, F. A. Esq. Trevor ter. .. annual | 1 | 1 | 0 |
| Bachelett, Pierre, Esq. Hornsey, annual | 1 | 1 | 0 |
| Browne, C. Esq. Bethel pl. Camberwell | 1 | 1 | 0 |
| Burnett, Dr. Alton, Hants annual | 1 | 1 | 0 |
| Broxholm, Dr. Esq. Barnsbury rd., ann. | 1 | 1 | 0 |
| Broadbent, J. Esq. Collingham, Newark, | | | |
| annual .. | 1 | 1 | 0 |
| Bowman, Wm. Esq. Clifford st. .. annual | 1 | 1 | 0 |
| Bourne, Henry, Bromley, Rippingale .. | 1 | 1 | 0 |
| Buchanan, A. Esq. Commercial rd. east | 5 | 5 | 0 |
| Bury, George, Esq. Whetstone, annual | 1 | 1 | 0 |
| Bryant, Walter, Esq. Bathurst st., ann. | 1 | 1 | 0 |
| Cabbell, Benjamin Bond, Esq. M.P. .. | 52 | 10 | 0 |
| Clarke, Sir Charles Mansfield, Bart.... | 26 | 5 | 0 |
| Copeland, Thomas, Esq. F.R.S..... | 25 | 0 | 0 |
| Carpue, Mrs. Up. Charlotte st. Fitzroy sq. | 21 | 0 | 0 |
| Coulson, W. Esq. Frederick pl. Old Jewry | 21 | 0 | 0 |
| Collected by Holmes, Henry, Esq. 9, | | | |
| York terrace, Regent's pk. (by Card) | 14 | 2 | 0 |
| Cornwallis, the Lady Elizabeth..... | 10 | 10 | 0 |
| Cornwallis, the Lady Louisa | 10 | 10 | 0 |
| Cancellor, J. H. Esq. Chester terrace.. | 10 | 10 | 0 |
| Cheyne, R. R. Berners street .. annual | 1 | 1 | 0 |
| Conolly, Dr. Hanwell | 10 | 10 | 0 |
| Cooke, C. T. Esq. Cheltenham | 10 | 10 | 0 |
| Clark, W. Esq. Sutton | 10 | 10 | 0 |
| Cameron, J. C. Esq. Lower Seymour st. | 5 | 5 | 0 |
| Clarke, F. Esq. Henrietta street, Caven- | | | |
| dish square | 5 | 5 | 0 |
| Clifton, N. Esq. 38, Cross st. Islington. | 5 | 5 | 0 |
| Clifton, Nath. Henry, Esq. Islington.. | 5 | 5 | 0 |
| Crellin, Dr. St. John's wood | 5 | 5 | 0 |
| Cressingham, J. Esq. Carshalton..... | 5 | 5 | 0 |
| Ditto ditto annual .. | 1 | 1 | 0 |
| Cook, Dr. Trinity square..... | 5 | 5 | 0 |
| Cowley, John, Esq. Oxford terrace.... | 5 | 0 | 0 |
| Ditto ditto annual .. | 1 | 1 | 0 |
| Calthorpe, the Hon. Mrs. Grosvenor sq. | 5 | 0 | 0 |
| Collected by a Lady..... | 5 | 1 | 1 |
| Clayton, James, Esq. Percy street.... | 5 | 0 | 0 |
| Cathrow, William, Esq. Weymouth st. | 5 | 0 | 0 |
| Cooke, W. H. Esq. Camden terrace .. | 2 | 2 | 0 |

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| Collected by a faithful Servant of Mr. | | | | of £10 each | 50 | 0 | 0 |
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| Regent's park | 1 | 1 | 0 | Guthrie, J. G. Esq. F.R.S. Berkeley street | 10 | 10 | 0 |
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| annual | 1 | 1 | 0 | Hardinge, H. Esq. Silver st. Golden sq. | 1 | 1 | 0 |
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| Ditto ditto | 1 | 1 | 0 | Watlington, Mrs. Caldecot, Herts, ann. | 1 | 1 | 0 |
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| Ditto ditto | 1 | 1 | 0 | Weber, F. Esq. M.D. Norfolk st. ann. | 1 | 1 | 0 |
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| Tarleton, W. Esq. Birmingham | 5 | 0 | 0 | Whetton, Mr. | 0 | 10 | 6 |
| Tottingham, The Misses, Up. Harley st. | 5 | 0 | 0 | Winslow Forbes, M. D. Sussex house, | | | |
| Thornton, Mrs. and the Misses, Mon- | | | | Hammersmith | 5 | 5 | 0 |
| tague Square | 3 | 5 | 0 | | | | |
| Turnley, Joseph, Esq. Eaton pl. south | 2 | 2 | 0 | Yearsley, James, Esq. Savile row | 10 | 10 | 0 |
| Thomas, H. Esq. Vauxhall road | 2 | 0 | 0 | | | | |
| Three Sisters of Medical Men, by Dr. | | | | | | | |
| A. Wilson | 1 | 10 | 0 | | | | |
| Terry, W. Esq. Southampton Bldgs. ann. | 1 | 1 | 0 | | | | |
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| Tuke, Dr. Chiswick | 1 | 1 | 0 | | | | |
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Lectures.

NOTES OF
CLINICAL LECTURES,

Delivered at Guy's Hospital.

BY JOHN HILTON, ESQ., F.R.S.,
Surgeon to the Hospital.

(Reported by MR. F. W. PAVY.)

THE ease to which it is my intention to advert, may be termed one of great simplicity as regards its diagnosis: the physical characters observable at the seat of injury, with the history given by the patient, leaving no question, or difference of opinion, as to the nature of his malady. It is a case, therefore, which presents a wide contrast to that forming the subject of our consideration during the two preceding lectures; in which you will remember the diagnosis was involved in much obscurity, and right inferences could only be grounded on a very close and critical analysis of the symptoms presented by the patient. The following are the notes of the case as I have them before me: and I would here observe to you, that I shall, as I have hitherto done, make remarks here and there as I think necessary, whilst reading the report:—

Traumatic Aneurism of the Brachial Artery.

W. B., æt. 36, admitted into the hospital Nov. 26th, and received into the clinical ward Dec. 4th, 1850. A married man, occupied as a butcher, and residing at Feversham, in Kent.

Feversham, you will remember, gentlemen, is a neighbourhood the inhabitants of which suffer considerably from miasmatic influences; and we shall hereafter see that this became a matter of consideration, as bearing on some of the features of the case in question.

He states that two months ago, that is, early in October last, whilst in pursuit of his ordinary employment, he let a knife fall from his mouth on to his left arm, which occasioned a small wound on the front of it, just opposite or a little above the elbow-joint, the arm being naked or exposed at the time. Instantaneously a jet of scarlet blood spouted out, and reached a distance of some feet; but he soon stopped it himself by pressure, and afterwards applied to a neighbouring surgeon, who placed a pad of lint on the wound, and bound the arm up tightly, at the same time applying a splint to the elbow, with the

view of keeping the parts at rest. The hæmorrhage had been entirely arrested by pressure with the fingers, and a swelling about the size of a walnut had formed, before the application of the pad of lint and bandage. Having kept his arm in this condition for a fortnight, he of his own accord, and without the permission of his medical attendant, removed the bandage, and went to work as usual, thinking that all was right again. He felt no pain or inconvenience in the arm, yet the swelling remained, now about the size of a filbert, in the part where the wound had occurred, and it so distinctly pulsated as to be perceptible through his clothes. About a week after he had resumed his ordinary occupation he one day exercised his injured arm a great deal, in carrying or suspending upon it a heavy basket of meat, and in the evening it became swollen and painful, and continued to swell until his admission into the hospital a fortnight ago. His arm then presented a large tense swelling, extending half-way down the forearm towards the wrist, and along the upper arm about one-third of its length. It was especially prominent on the front and inner side of the elbow, and excepting at this prominence it was hard and solid to the touch, and seemed to be situated behind or beneath the brachial artery, the pulsation of which could be traced over it. A *bruit* could be heard over the course of the artery, but in no other position.

I may here remark, it was conclusively ascertained that the artery was wounded behind or at its posterior aspect, by the knife piercing the skin about three-quarters of an inch to the outer side of the artery, and thus reaching obliquely the posterior part of the vessel. It is stated that the artery could be distinctly traced continuously in front of the tumour, which proves that it was merely wounded, and not completely divided, and that its function as a tube, although disturbed, was not destroyed.

The pulsations of the radial and ulnar arteries were perceptible but small; and on examining the other arm, the brachial and other arteries seemed more than ordinarily superficial. He complained of much pain in the neighbourhood of the swelling, and says that he experienced a sensation of numbness down the outer side of the forearm, and over the ball of the thumb. On his admission, cold and pressure were applied to the tumour in the following manner:—His arm being laid on a bladder of ice, a sand bag was placed over it; thus, at the same time, keeping it at rest and exerting a moderate amount of pressure. Under this treatment the swelling has much subsided, has become less painful, and pre-

sents no evidence of a bruit in any situation.

The feeling of numbness which he experienced over the ball of the thumb and on the outer side of the forearm, arose from the pressure of the effused mass of blood on the external cutaneous or radio-spiral nerve; more probably the former than the latter.

Dec. 9th.—The ice to be discontinued, Lotio Alba to be applied instead, and the arm to be placed in a splint.

12th.—The swelling appears smaller, but in one situation there is a somewhat conical projection, which gives an evidence of fluctuation.

14th.—The aneurism has slightly increased in size, and the arm below it is more swollen.—Ordered—Misturæ Magnesiae cum Magnesiae Sulph. ʒj., omni mane.

16th.—The splint was removed yesterday, and to-day his arm seems decidedly better, and less swollen. To have it placed in carded wool, and a flannel bandage over it.

20th.—Expresses himself as feeling easier and better, and the tumour is rather softer and smaller.

24th.—Progressing favourably.

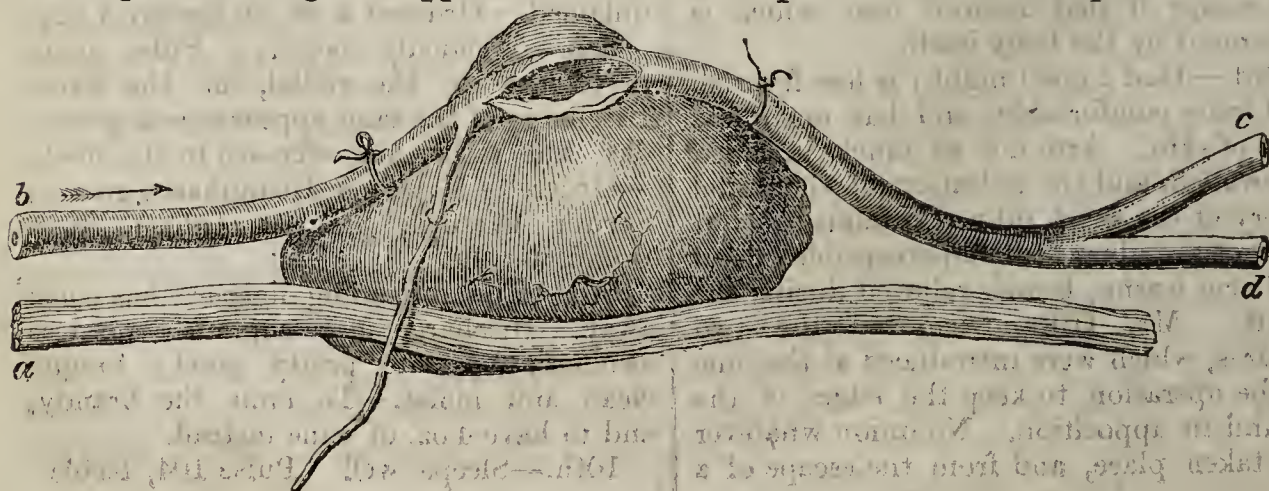
27th.—There is a decided and prominent projection in one part of the swelling, which is soft to the touch, distinctly fluctuates and pulsates, and to the ear communicates an aneurismal bruit.

28th.—Directed to have pressure applied to the brachial artery above the aneurism, so as to diminish the circulation of blood through the arm.

31st.—The pressure was applied by means of the tourniquet, but it occasioned some amount of pain, and the patient would not longer submit to it. He was determined to have an operation performed, and declared he would eat nothing more, until it was done. Mr. Hilton therefore consented to operate on him, and making a longitudinal incision over the swelling, tied the artery above and below the wound in it, leaving the sac unopened.

We observe by the report, that our patient was progressing, I may say favourably, till the 24th; but between the 24th and 27th there must have been some untoward change taking place, for he rapidly fell back, and an aneurismal bruit became again distinctly audible. We may infer that an aneurism is going on well, when it gradually gets harder and more solid: in this case, and in this particular, the condition of the swelling varied extremely, sometimes being reported as harder and at others softer. In the note which I received from the practitioner in the country whose care the patient was under previous to his admission into the hospital, I was informed that he had committed several acts of indiscretion; and I observed myself that he seemed not to attach that importance to his case which his own interest demanded. I therefore think that the varying condition of the tumour which I have just referred to was occasioned by these acts of indiscretion on his part. One day, as I was going round the wards, I found him using his affected arm, busily engaged in sharpening a knife for one of the other patients. Taking into consideration these circumstances, and the fact that he was progressing favourably till Christmas-day—a day above all others on which men throw off restraint, even in the hospital, to enjoy the festivities associated with the season of the year—I have no doubt that excesses and personal liberties on his part produced that serious and important change in the aneurismal tumour which was observed on the 27th. The pressure that was for a short time had recourse to, was applied to the brachial artery by means of the tourniquet; at first the pulsation of the sac was scarcely perceptible, but from the establishment of a collateral circulation it soon returned again, and I was therefore induced, when operating on him, to place two ligatures on the wounded artery, one above and the other below the wound.

Diagram showing the supposed condition of the parts at the time of operation.



a. Median nerve. b. Brachial artery. c. Radial artery. d. Ulnar artery.

Ligatures are inserted to show where the vessel was tied; and a portion of the brachial artery opened, displacing the aperture within it, communicating with the prominent part of the tumour.

Jan. 1.—Has passed a good night, and expresses himself as feeling comfortable, and quite free from pain or uneasiness. The pulsations of the radial artery of the affected arm can be distinctly, but feebly, felt; those of the ulnar are quite imperceptible. To continue the Lotio Alba to the swelling, and to keep the arm perfectly at rest.

2nd.—Appears a little feverish, and has passed a restless and disturbed night. Tongue furred, but moist; skin hot; pulse 112; arm somewhat swollen, with a slight blush around the wound; but complains of no pain in it. Directed to continue the lotion, to have the hand and forearm wrapped in flannel, and to be placed on beef-tea diet.

We observe here that the pulse was 112, and that there was no deviation from the natural standard noticed in the respiration. Considering, then, that in a state of health there are four beats of the heart to one respiratory act, and that under the same circumstances there are about eighteen respirations per minute, we perceive how much the heart and arterial system, in the case before us, were suffering from some irritation, for the pulse was greatly out of proportion to the respiration. In last lecture you will remember I drew your attention to an instance in which the irritation chiefly affected the respiratory system, which was out of all proportion to the circulatory system. The object of enveloping the hand and forearm in flannel was to preserve the natural temperature of the limb under the diminished supply of arterial blood to which it was subjected. Flannel, carded wool, and such like materials, are exceedingly valuable agents for this purpose, and far superior to heat artificially applied: they have no power themselves of generating heat, but being bad conductors of caloric, they act by retaining, or retarding the escape of that natural heat which is generated by the body itself.

3rd.—Had a good night; is less feverish and more comfortable, and has much less heat of skin. Arm not so much inflamed or swollen, and the pulsation of the radial artery at the wrist fully re-established, but that of the ulnar still imperceptible; hand and arm warm; bowels relieved during the night. Mr. Hilton removed the two sutures, which were introduced at the time of the operation to keep the edges of the wound in apposition. No union whatever has taken place, and from the escape of a

little sanguineo-purulent matter it is thought probable that suppuration may ensue in the aneurismal sac. Has a slight cough, and expectorates a small quantity of rather tenacious mucus; his chest also, on a stethoscopic examination, gives evidence of râles *sibilants et muqueux*. Complains of an occasional feeling of sickness, and has once or twice vomited a little greenish-coloured fluid. — Ordered — \mathcal{R} Magnesiae Carb. \mathcal{Oj} . ex Aquae Cinnamomi \mathfrak{zj} . bis die.

4th.—Does not complain of any pain, and his arm appears less swollen; but there is a more decided erythematous blush around the seat of the operation, and a slight purulent discharge from the wound. The appearance of the arm altogether is more unfavourable than yesterday.—Rep. Haust.

5th.—About the same. His bowels not having been relieved for three days, he was ordered— \mathcal{Pil} . Colocynth. cum Calomelane, \mathfrak{ij} . statim sumendæ.

6th.—Slept pretty well during the fore part of the night, but since then has experienced great uneasiness in the neighbourhood of the wound, accompanied with a dull, aching, and burning sensation. His arm appears much inflamed, and is also tense and fluctuating just above the elbow. A lancet being introduced at the point of fluctuation, about an ounce of dark grumous blood, mixed with a little pus, escaped. It was offensive to the smell, and did not coagulate on exposure to the air. Obtained great relief from the evacuation of this fluid, and from the bread poultice which was afterwards applied. Bowels have acted three times; pulse 90, soft and compressible; tongue furred, but moist; pulsation of both the radial and ulnar arteries of the affected arm quite inappreciable.

7th.—The upper ligature, that was placed on the artery, came away this morning with the removal of the poultice. Expresses himself as much better; tongue cleaner; appetite improved. There is a discharge of dark grumous blood from the wound; the arm itself is less swollen and inflamed.—Ordered 4 oz. of brandy a day.

8th.—Decidedly better. Pulse again perceptible in the radial, at the wrist. Discharge of the same appearance as yesterday, but rather less offensive to the smell.—Ordered— \mathcal{R} Quinæ Disulphatis, gr. \mathfrak{iv} .; Syrupi Aurantii, \mathfrak{zss} . ex Infuso Rosæ Comp. ter die.

9th.—The remaining ligature has come away. Discharge more copious; arm less swollen; appetite pretty good; tongue clean and moist.—To omit the brandy, and to have 4 oz. of wine instead.

10th.—Sleeps well Pulse 104, feeble

discharge copious, and of the same nature; appearance of the wound healthy.

11th.—Improving. Eats, drinks, and sleeps well, and feels altogether stronger. Complains of neither pain nor uneasiness; and the temperature of the affected arm is equal to that of the other. Discharge less, and wound beginning to granulate.

14th.—Better; general health improving; discharge more healthy and less copious, and the wound rapidly healing. The radial artery pulsates with considerable force, but the ulnar still imperceptible.

15th.—A most marked change for the worse has taken place since yesterday. He has a flushed face; a hectic appearance; a small, quick (110), and feeble pulse; a brownish, furred tongue, and a dry clammy mouth. Discharge darker in colour, and thinner in consistence. Bowels have not acted for two days.—Ordered—*R*. Vini Ipecac. $\mathfrak{m}\mathfrak{x}\mathfrak{v}$.; Tinct. Conii, $\mathfrak{m}\mathfrak{x}\mathfrak{x}$.; Julepi Ammon. Acet. $\mathfrak{z}\mathfrak{j}$. Misce ut fiat haustus 4tis horis sumendus.

16th.—Feels a little better, but last night vomited each dose of the medicine soon after it was taken. Pulse 101; bowels freely open; sweat profusely during the night. The wound itself has a healthy appearance; but a few inches below it, is a small superficial swelling, which is red and painful to the touch.—*Mistura repetatur ut heri; autem sine Vino Ipecacuanhæ*.

18th.—Sleeps pretty well, but perspires very much during the night; is more easy and comfortable. Pulse 104, feeble; tongue dry and furred. Arm continues as warm as the other, but the pulsation of the radial is again only just perceptible. Wound continues as before, with healthy granulations.

19th.—Is much worse to-day. Pulse exceedingly weak and rapid; tongue brown, dry, and furred; face with a marked hectic flush on the cheeks. Has been greatly reduced since yesterday by an excessive diarrhoea, which came on last night, and continued till this morning about noon. Complains also of a sore throat, which interferes with his freedom of swallowing.

20th.—Pulse 126, very feeble. Tongue more moist, and a little less furred. Has had no recurrence of the diarrhoea. The soreness of the throat persists, and he has a troublesome cough, with an expectoration of viscid mucus. Mr. Hilton opened the small superficial swelling on the arm below the wound, and purulent matter escaped. Dr. Hughes being requested to see him, and prescribe for him, ordered—*R*. Quinæ Disulph. gr. iij.; Tinct. Aurantii, $\mathfrak{z}\mathfrak{j}$.; Syrupi ejusdem, $\mathfrak{z}\mathfrak{j}$.; Acidi Sulph. dil. $\mathfrak{m}\mathfrak{v}$.; Aquæ ad $\mathfrak{z}\mathfrak{i}\mathfrak{s}\mathfrak{s}$. M. fiat haustus

sextis horis sumendus. *R*. Pulv. Opii, gr. j. h. s. om. nocte. Wine, $\mathfrak{z}\mathfrak{x}\mathfrak{i}\mathfrak{j}$.

On the 7th—that is, the day after the aneurismal sac was opened—I think, without doubt, our patient was better, and gave us reasonable expectations of a favourable result. His improvement was, however, but of a transitory duration, and he unhappily soon again relapsed into a condition as hopeless as it was obscure, and from which even the most sanguine, could scarcely anticipate a recovery. During the time he was getting constitutionally worse, his arm was progressively improving, and the wound healing. It is a circumstance of frequent occurrence to observe profuse perspiration or diarrhoea concomitant with suppurative fever; and they might perhaps be regarded as critical discharges, or the means adopted by nature for expelling the morbid agent, or *materies morbi*, circulating in the blood. If this supposition be correct, it would appear wrong to check these discharges; but, on the other hand, nothing is so debilitating as profuse sweating, or a profuse diarrhoea; and the question might therefore be raised, whether we ought or ought not to allow these evacuations to proceed—certainly, however, not to too great an extent. On the 20th, I had great satisfaction in procuring the advice of Dr. Hughes, whose care in investigating the complaints of his patients, acumen in discovering their disease, and judicious skill in treating them, can scarcely be exceeded.

To proceed again with the report. On the 21st, it is stated, he appeared somewhat better, but still in a very low and weak condition, and with an exceedingly soft and compressible pulse, at 120. Dr. Hughes, having examined him, gave his suspicions of the existence of pulmonary mischief. Wound on the arm looking perfectly healthy.

23d.—Pulse 130, very feeble; has a more cheerful appearance, but is visibly getting lower and weaker.—Ordered—*R*. Ammon. Sesquicarb. gr. v.; Tinct. Cardam. co. $\mathfrak{z}\mathfrak{j}$.; ex Decocti Cinchonæ, $\mathfrak{z}\mathfrak{j}$. ter die. His wine to be increased to $\mathfrak{z}\mathfrak{x}\mathfrak{x}$.

24th.—Aspect better. Tongue moist, and but slightly furred; pulse 130, soft and compressible, but apparently a little more power about it. Appetite a little better. The wound continues to look well, and his arm is quite easy and comfortable; as warm as the unaffected one, and scarcely, if at all, swollen.

It appears, then, that lately all his symptoms ominous of danger have been quitting the arm, and manifesting themselves constitutionally, or through his general condition. Locally, in fact, everything was to all appearances progressing favourably; but there can be little or no question of

the arm being the foundation or cause of the whole of the other mischief.

25th.—Has been delirious during the night, and this morning attempted to get out of bed, against the restraint of the nurses. Tongue continues clean and moist; pulse very small, feeble, and irregular; sweats most profusely, and, although sometimes sensible, is at other times quite delirious. There has been, during the last few days, a fulness about the neck accompanying the sore-throat which he has complained of: this has somewhat increased; and, although there is no evidence of fluctuation, Mr. Hilton stated his suspicions of there being a collection of matter beneath the cervical fascia.

I may here remark that no fluctuation whatever could be detected in the swelling about the neck; otherwise I should have certainly at once opened it.

9 P.M.—Is evidently rapidly sinking. Appears greatly reduced by the excessive diaphoresis which still persists.

26th.—At 4.30 A.M. expired.

The foregoing is the history and report of a case of much interest and importance, and one which, from the first, presented no difficulty or obscurity in point of diagnosis; and, although at the onset properly and judiciously treated by the country practitioner under whose care he fell, yet ultimately leading to those unhappy results which, I think, we may fairly say, were brought on by his own obstinacy and folly in disobeying the injunctions which were strictly laid down to him as being necessary for his recovery.

The course I shall pursue here will be the same as in preceding lectures. Accordingly, I shall first give an analysis or exposition of the symptoms before proceeding with the post-mortem examination, where everything is more effectually cleared up.

According to the history of the case, it appears that, only a fortnight after the accident, our patient removed the bandage from his arm, and went to work as usual, although there remained a small pulsating tumour near the wound. In a fortnight more, he was indiscreet enough to carry a heavy basket of meat swinging on his arm, which no doubt disturbed the clot already formed over the wound in the vessel, and led to a fresh effusion of blood. This gradually diffused itself amongst the surrounding tissues, until it presented an enormous swelling, extending into the upper arm, and down the forearm nearly to the wrist. Now, in all probability, had he kept the pressure applied, and his arm at rest for a month or six weeks after the injury, he would have escaped that secondary effusion which formed the subsequent important feature of his case. In no in-

stance, I would say, is it safe to remove the compression under at least a month or six weeks after a wound of the brachial artery; and, during this time, the arm ought also to be maintained in a most perfect state of rest and quietude.

By diffused aneurism is meant, where the blood is diffused into the surrounding structures, without any definite or distinct boundary. If, after a small wound in an artery, pressure be applied and continued, and the case pursue a natural and favourable course, the effused blood coagulates over the opening, perhaps becomes organised, effectually occludes the aperture, and prevents any appearances of an aneurismal sac. If, however, such means be not strictly followed out, any motion of the parts may lead to a disturbance of the clot at first formed, and a subsequent re-escape of blood, which, in the case before us, diffused itself amongst the muscles beneath the fascia. Possibly, an apt illustration of what takes place in a case of this sort may be adduced in the following example. You may have been operating, say, for the removal of a breast during the day; and in the evening you are summoned to the patient by a message to the effect that the wound has burst out bleeding again. On arrival, you open and examine the wound, and there is no hæmorrhage: perhaps, on looking over the surface of the wound, you see in one place a rounded coagulum exceedingly like a black cherry. It is from behind this clot of blood, you may rest quite assured, the hæmorrhage has occurred. You remove the clot, and a jet of arterial blood discloses the source of bleeding.

The *bruit* which is audible in an aneurismal tumour assumes characters varying with the condition of the aneurism itself, and its relation to the artery. When the opening into the sac is small, so as to offer a considerable amount of obstruction to the free ingress and egress of blood—as it was, probably, in the case under consideration—the noise is harsh and sharp: when, on the contrary, the opening is larger, there is a more soft or diffused bellows murmur; or even no abnormal sound whatever, if the opening be large, and the aneurism have a smooth lining membrane, and offer no obstruction to the circulation.

Various means having been adopted in the treatment of the case, and having proved unsuccessful, compression of the artery above the swelling was tried. It had, however, but a very unfair and insufficient trial; for, after it had been applied a short time, and before it could have been expected to have done much good, the patient rashly but strenuously declared that he would submit to nothing more, save

an operation, and that he would not eat or drink until it was performed. From his first entrance into the hospital, he seemed obstinately and unwisely bent towards having, as he termed it, the swelling opened, saying that he was sure nothing else would cure him. To this perverseness, then, may be in part attributed the unsuccessful results which attended all the means that were had recourse to, with the view of obviating the necessity of an operation; for, in such a case, a successful issue mainly depends on the patient himself, in carrying out the instructions given him. As I found his inclinations so determined and fixed,—that he was suffering much pain, from the application of the pressure, and that he actually had commenced carrying into effect his threat by depriving himself of food during 24 hours,—I consented to operate on him. This I did, by cutting down and placing ligatures on the artery over the tumour, one above and the other below the opening in the vessel: a third ligature I also placed on one of the bleeding arteries from the surrounding structures, which continued to supply blood to the arterial trunk enclosed between the first two ligatures, and, through it, to the aneurism itself. It is always important, with this operation, to cut off all direct supply of blood to the aneurism, even by small arterics, if accessible by ligature; otherwise, their increasing dimensions during the establishment of the collateral circulation may demand a second operation to arrest the flow of blood.

A few days after the operation, his condition assumed a most grave and serious aspect, and one of extreme danger; and, although he afterwards to a certain extent rallied, yet, from the day of the operation, he never went on continuously or harmoniously well—always something or other to interrupt his favourable progress.

In the class of cases such as the one occupying our attention, it is usual to find the aneurism or diffused blood in front of the wounded artery, and the source of bleeding in the posterior walls of the sac. I believe also it is customary amongst surgeons to open the sac at once, and so expose the opening in the vessel. This plan, however, I did not think it advisable to adopt, although it was afterwards suggested that the patient might have stood a better chance had I have done so. You may naturally enquire why I deviated from such an established method of practice? I will give you my reasons for doing so. Experience teaches us that, after an aneurismal sac has been laid open, it is extremely liable to take on a sloughing action; or, at other times, suppuration is very extensive; and from both these causes patients have

died; that also, in cases of ordinary circumscribed aneurism, which may, by some chance circumstances, have become diffused, the placing a ligature on the artery above the aneurism, so as not to interfere with the sac itself, is frequently followed by a complete cure of the aneurism, and a complete absorption of the extravasated blood. By the operation I performed on this man, I put ligatures on the artery without implicating the sac; thus placing him in a corresponding condition to the latter of the two examples. I therefore did not open the aneurismal sac during the operation, but waited until I should find it necessary, if suppuration occurred, or decomposition of the blood took place.

It is still a question whether our patient's symptoms did not in part arise from an atmospheric taint derived from the district in which he had been living; and it was under this presumption that, in our treatment, we gave him large doses of quinine.

Taking the whole facts of the case into consideration, which we have as yet investigated, what conclusions do we arrive at as to the cause of death? There was no swelling or pain of any of the joints—no indication, in fact, of any phlebotic mischief; neither was there any evidence of absorbent inflammation, either by the presence of red lines or enlarged glands. To speak, then, as definitely as I think we are justified in doing, his symptoms most corresponded with suppurative fever. This, however, is a subject about which we are as yet but little acquainted. The continuation of the case I shall resume at next lecture, and afterwards proceed with the consideration of a case of popliteal aneurism.

EPIDEMIOLOGICAL SOCIETY.

At the next ordinary meeting of the Society, to be held on Monday, Dec. 1st, at the House of the Royal Medical and Chirurgical Society, 53, Berners Street, two papers will be read,—one on cholera in Jamaica, by Dr. Gavin Milroy; the other, on a mode of treatment of cholera, by W. J. Cox, Esq.

OBITUARY.

On the 13th inst., suddenly, at Hertford, Richard Shillitoe, surgeon, aged 73, a member of the Society of Friends.

On Tuesday, the 18th inst., at Brighton, Thomas Yates, Esq., M.D., aged 68.

On the 23d inst., at the residence of J. Robertson, Esq., Royal Crescent, Glasgow, Dr. Charles Inches, R.N., deservedly esteemed and regretted.

On the 23d inst., at 10, Oval, Cambridge Heath, in the 60th year of his age, Fred. Ager, surgeon, formerly of Whitechapel.

Original Communications.

ON

CLEFT PALATE,

WITH CASES IN ILLUSTRATION OF ITS
SUCCESSFUL TREATMENT.

BY GEORGE FREDERICK LANE, ESQ.

Resident Surgeon at the Royal Free Hospital.

(Read before the Abernethian Society,
Feb. 13, 1851).

THE principal object of the present communication is to bring forward some cases of cleft palate in illustration of an improved method of treatment furnished by modern surgery, the advantages of which, though well established in the minds of those who have yielded it a thorough investigation, is still questioned by many surgeons of eminence as operators who have hitherto been in the habit of practising the old operation. This treatment differs widely in principle from the more usual method; and it becomes an important subject for consideration, as to how far the more recent operation is entitled to the improvement which is claimed for it,—the disadvantages of the old proceeding, the advantages of the new one.

Before, however, entering into the relative merits of the two operations, a few remarks upon the peculiar structure and function of the parts concerned may not be deemed misplaced; though it will not be necessary to describe these in detail, but only to make reference to certain points bearing upon the operations in question.

The *velum pendulum palati* consists of muscular and glandular structure, enclosed in mucous membrane, and is a continuation of the palate posteriorly into a moveable flap, with an inclination downwards and backwards: it constitutes a valve at a point where two passages meet, and is adequate to the closure of either of these for the temporary advantage of the other.

Its muscular portion forms a layer on its postero-superior surface, which is firmly attached by tendinous and muscular fibres to the horizontal plates of the palate bones, and by muscular alone to the sides of the pharynx; by mingling

with the superior constrictor, each side is also connected with the internal pterygoid plate and hamular process of the sphenoid bone. It is covered by a thin mucous membrane, having numerous subjacent glands.

The glandular portion is continuous with that covering the hard palate: it consists of firm but coarse glandular structure, intersected by fibrous septa, and contains an abundance of very tenacious mucus; anteriorly, and on each side, it forms about two-thirds of the whole thickness of the velum, diminishing, however, towards the middle (producing a concavity corresponding to the vault of the palate), and from before backwards towards its free border: it is covered by a thick and dense mucous membrane.

The muscles consist of five pairs, of which one is united in the middle line, forming the azygos uvulæ; they differ materially in size, and are of so complex an arrangement that their action is not very obvious.

The *levator palati* has a direction downwards, inwards, and forwards, and is of equal size, and muscular throughout. Each muscle spreads out at its inferior attachment, and is inserted into the middle of the velum palati, with the substance of which it blends; but it is more immediately connected at its insertion with the palato-pharyngeus, the principal part of which usually runs beneath it. The two muscles are separated below by the azygos uvulæ, beneath which some of their fibres unite in the middle line. Extending round its under and posterior surface is the concave upper margin of the superior constrictor; this consists of a thick bundle of muscular fibres, which pass from their attachment to the lower third of the internal pterygoid plate and hamular process of the sphenoid bone,—at first, almost directly backwards, where they join with the fibres of the palato-pharyngeus; they then curve inwards, and, ascending to the mesial line, are prolonged by aponeurosis to the basilar process of the occipital bone.

The *circumflexus* or *tensor palati* becomes tendinous before turning round the hamular process of the sphenoid bone, and is here provided with a beautiful synovial capsule, which would appear to be associated more with the sharp turn made by the tendon, than as indicating much movement at this part: having passed this, it immediately ra-

diates into a fibrous expansion, situated horizontally, and is attached to the transverse ridge on the horizontal plate of the palate-bone, to the extremity of the alveolar arch of the superior maxilla, and also to the muscle of the opposite side, beneath the *azygos uvulæ*. This fibrous expansion, by its density, serves as a point of union for the other muscles of the soft palate, gives firmness to the latter, more especially near its bony attachment, and prevents the sudden transition from bone to muscle which would otherwise take place at this part; it also enables the velum to maintain its ordinary oblique position midway between that which it is made to assume during mastication and deglutition.

The *palato-pharyngeus* ascends behind the tonsil from the thyroid cartilage and side of the pharynx, and divides into two portions: of these, by far the larger passes upwards with an inclination forwards and inwards beneath the levator, to the under surface of the circumflexus palati, in which they terminate, or are prolonged to the hard palate; the other division consists of a small band of muscular fibres, running more transversely, and forms the free margin of the palate. Some fibres intermediate between these two portions interlace with the insertion of the levator palati. The first or longitudinal portion is situated, for the most part, between the levator and tensor palati muscles, and blends, on its outer surface, with the pterygoid extremity of the upper concave margin of the superior constrictor, the union of the two forming a muscular bundle of considerable size. Occasionally a portion of the palato-pharyngeus passes vertically behind the levator palati to the side of the eustachian tube, and has been named *salpingo-pharyngeus*.

The *palato-glossus* is the smallest muscle of the palate, and forms an arch, with the convexity outwards, immediately in front of the tonsil. It radiates at its palatal attachment; the middle fibres becoming somewhat tendinous, unite with those of the opposite side; those near the free border of the palate run with the transverse slip of the palato-pharyngeus, while those in front pass into the tendinous expansion of the circumflexus palati. The fibres passing to the middle line, in conjunction with the longitudinal portion of the palato-pharyngeus, with which they interlace, receive the insertion of the levator palati

of the same side by intermingling of fibres, and by this means these muscles can act antagonistically.

The *azygos uvulæ* extends from a fibrous expansion in connection with the spine of the palate bones along the superior surface of the raphe, and terminates in the uvula.

From this rough sketch it may be perceived that the lateral connections of the velum palati are almost entirely muscular; and this is important in relation to the susceptibility of the flaps, in cases of fissure of the palate, to participate in the general movements of the pharynx, and also as affording an adequate explanation of the width of the cleft, produced, in the majority of instances, not by an absence of tissue, but by the tonic action of muscles unopposed by their proper antagonists.

It should be observed here, as bearing upon the subject (since the circumflexus palati has been held out as the muscle having more influence in the production of tension of the flaps, after their union by suture, than the other muscles of the palate), that a large proportion of the aponeurotic fibres of this muscle are inserted into bone, leaving but a small portion which could possibly be concerned in producing tension, and that portion uncalculated to do so, from its intimate connection with the denser part in front having a bony attachment. Moreover, this muscle is confined to the anterior half of the velum, where the fissure of the palate is narrowest. What, then, is the cause of the separation of the posterior part? The answer to this may easily be found in the obvious action of the levator palati muscle and pillars of the fauces. There is some difficulty in closing the fissure in front in most cases, attributable to the greater density of the parts there, and their peculiar position in relation to the bony structures, and, possibly, slightly to the action of the circumflexus palati.

The principal action of the circumflexus palati is to give *firmness* to the velum, especially near the base, during the action of its other muscles; but, doubtless, all the palatal muscles are concerned, more or less, in the production of each of the varied movements of the soft palate.

The movements of the pharynx appear to have been but little understood till a very recent period; accordingly, we find, in Mr. Lawrence's work upon

the Pharynx, published in 1834, the following passage relating to the closure of the upper part of the pharynx from communication with the nose, as in swallowing.

“At the time that the elevation and retraction of the tongue urges the morsel of aliment into the pharynx, the velum palati is drawn up against the choanæ narium.”*

The closure of the pharynx superiorly, occurring during deglutition, is produced by slight elevation of the soft palate, so as to bring the upper and posterior surface of its free margin against the back of the pharynx; and any person may do this at will by expiring air through the nose audibly, and in perfectly isolated jets, while the mouth is closed: the period immediately preceding each gush of air marks the contact of the soft palate with the pharynx.

This movement of the velum is probably effected by the combined action of the levator-palati and palato-pharyngeus of each side, assisted by the agygos uvulæ. The lateral curved fibres of the superior constrictor approach it on either side, and its firmness is attained by traction of each tensor palati muscle.

The closure of the fauces at the same period is effected partly by the action of the pillars of the fauces, which constrict it, but more especially by the elevation of the base of the tongue, which is kept in contact with the roof of the mouth by means of its proper muscles, assisted by the mylo-hyoidei.

The soft palate and upper part of the pharynx are so near each other in the natural state, that they are brought into close apposition by a very limited movement of the velum and sides of the latter; the kind of closure resembling a valve opening downwards.

The proximity of the pharynx to the posterior nares may be seen from the position of its aponeurotic attachment to the base of the skull, which corresponds to a part but little behind the free margin of the hard palate; and hence the posterior wall of the pharynx is easily within the range of the movements of the velum.

This point has been adverted to more particularly, since the closure of the

upper part of the pharynx from communication with the nose is described by some anatomists of the present day as effected by an elevation of the soft palate, the superior constrictor coming forward at the same time to meet it.

A little reflection on the relation of the parts will show that the constrictor does not come forward, but that (having a fixed position behind) the narrowing of the cavity which it encircles is obtained by approximation of its lateral walls, much in the same way; the position only being changed, that the lateral fibres of the diaphragm descend without movement of its tendinous centre.

The following reasons may be assigned for this opinion:—The natural relations of the parts are such as to be efficient without such movement. The nature of the attachment of the upper part of the pharynx in the middle line to the parts against which it rests, and the improbability of the space which would thus be left behind, between it and the cervical spine, being filled by other structures.

In deglutition, the pressure of the tongue against the roof of the mouth, effected by its proper muscles and the mylo-hyoidei, is resisted by the tensores palati and pillars of the fauces. The levatores palati, from their connection, by intermingling of fibres with the latter, as before described, allows them to act from their palatal attachment, so as to constrict the fauces, without the velum being drawn down.

I apprehend that, in the various movements of the soft palate associated with deglutition and respiration, the elevators and depressors of the velum sometimes act as antagonists, both sets contracting simultaneously, as in closure of the fauces; at other times one set contracts, and effects movement at its attached part by virtue of a permissive action of the other set, and that, by different combinations of these movements, the function of the part is discharged. In this respect these do not differ from more strictly voluntary muscles. From the relative position of the muscles of the soft palate, it will be observed that the levator-palati and palato-pharyngeus of each side being antagonists to each other and to those of the opposite side, and acting coincidently, when the union in the middle line of the palate is interfered with by congenital fis-

* *Anatomico-Chirurgical Views on the Nose, Mouth, Larynx, and Fauces.*

sure, the combined action of the two on either side will be to draw the flaps asunder. It may be asked—how is this action compatible with the approximation of the edges of a cleft palate during attempts to swallow?

The only explanation of this action of which I am aware is given by Prof. Fergusson, who stated, in his valuable paper on Cleft Palate, that the edges are pushed together by the superior constrictor and upper part of the middle one. There appears but little evidence in support of this explanation; but, if attention be directed to the kind of curve the lateral fibres of the constrictor make round the side of the velum, it will be perceived that, when the muscle acts, the force produced is directed from without inwards and forwards; and hence it is not unreasonable to suppose that the same action which, in the normal state of things, effects the close approximation of the sides of the pharynx and velum, may, when there is cleft palate, and the muscles are put into inordinate action, as in the experiment alluded to, materially assist in bringing the flaps together.

Prof. Fergusson has alluded in his able paper upon the subject to some differences between the anatomy of the parts in their natural and in their cleft condition, and has in his possession, which through his kindness I had an opportunity of examining, the dissection of a cleft palate taken from an aged subject: from this dissection he has observed that "the palato-pharyngei muscles are not attached to each other as in the well-formed palate; these muscles are seen to form the principal part of the free margin of the palate, along the line of fissure: their course is somewhat semi-circular from their upper to their lower end, the convexity being towards the middle line; and it follows that during action, if not opposed in any way, they must pull the parts outwards."*

I have recently had an opportunity of dissecting, in conjunction with Mr. Savory, the palate of a child two days old, the subject of cleft palate and hare-lip, which may be interesting in connection with the specimen above alluded to, and from which it differs somewhat. The dissection is in the museum of St. Bartholomew's Hospital.*

It will be observed that the palatal muscles are remarkably well-marked at this early age, and in no respect differ from the same in their normal condition, as regards relative position, further than in their want of union in the mesial line.

The right flap is the larger of the two, and has a broader bony attachment: the fissure, which is wide, extends through the hard palate, implicating the alveolar margin in front, and laying open the nasal cavity to the left of the septum: a vertical section has been made of the tongue and larynx, and the muscles of the right side dissected.

The levator palati takes its usual direction from the base of the skull, in connection with the cartilaginous part of the eustachian tube, to the middle of the velum, where it spreads out immediately outside the azygos uvulæ. The palato-pharyngeus spreads out at its upper part: one slip forms the free margin of the soft palate, running to the base of the uvulæ; the next fibres mingle more or less with the levator palati, but the larger portion of the muscle pursues a course outside and below the insertion of that muscle, in the direction of the fibrous expansion of the tensor palati.

The palato-glossus is well marked, and as regards relative size is somewhat larger than in the adult. The fleshy portion of the tensor palati is large, but owing to the imperfect development of the pterygoid plates it is very short, and its tendinous expansion has not acquired sufficient denseness to be recognised as such. The azygos uvulæ is of considerable size, and each half occupies a free margin of the fissure.

Case of Cleft Palate successfully operated on according to Professor Fergusson's method.

Mary Derry, æt. 20, a healthy-looking girl, was admitted into the Royal Free Hospital, under the care of Mr. Gay, for a congenital fissure of the velum palati, which she was anxious to have operated upon. The pharynx was quite healthy, and the fissure, which was situated in the mesial line, extended quite through the soft palate, but did not implicate apparently the bony structures, and divided the uvula into two equal portions: each flap was of firm consistence, and sufficiently moveable

* Medical Times, March 6th, 1847.

† Malformations. Series A, 10 a.

and abundant to admit of the edges coming nearly in apposition mesially, during forcible deglutition: this movement, which has been alluded to before, may be easily seen while the patient attempts to swallow a small quantity of fluid with the mouth open, but requires a little practice to enable it to be done easily.

On irritating the flaps by means of a pointed instrument, each was drawn upwards and outwards, as it were spasmodically, so as to be almost buried in the sides of the pharynx. Her mouth was rather small; but, on the other hand, the great patience and determination that she manifested, together with the healthy state of the flaps and pharynx, rendered it a favourable case for operation. She stated that none of her relatives were remembered to have had a similar affection, and her mother attributed it to having seen a child with cleft palate during her pregnancy; that she had never been able to swallow fluids without a portion passing into the nose, but that by throwing her head back she was enabled to prevent its escape externally: her speech was unusually indistinct for a cleft of the soft palate only, and she complained of deafness.

The girl being in good health and spirits, the operation for its cure was performed by Mr. Gay, after Professor Fergusson's method, in the presence of Mr. Wakley, Mr. Henry Smith, and others. After section of the levator palati of one side, the corresponding flap became incapable of being drawn up in the spasmodic way before alluded to upon irritation with a pointed instrument, and presented a strong contrast to that of the opposite side when similarly irritated; and after division of both levator palati muscles, the flaps were observed to have fallen towards each other, so that the cleft was reduced to about half its former size; the incisions were made freely, and the flaps were rendered by them loose and flaccid, and they could now be easily brought together without producing any tension: it was therefore deemed unnecessary to divide any other muscles. The flaps were then dissected from the hard palate for a short distance in front of the cleft, to facilitate the closure of the parts at the angle of the fissure. The margins of the flaps were freely pared, and brought together by five sutures,

according to Prof. Fergusson's method, a detailed account of which will be found in his papers on the subject. The introduction of the sutures was found to be the most difficult part of the operation; they were tied, in order, from before backwards, those parts being closed first where there was most difficulty in their approximation. The bleeding, which was very trifling, was easily arrested by gargling with iced water previous to tying the sutures.

During the operation the patient remained tranquil, and appeared to suffer no particular pain; but the continued efforts to repress coughing, while the irritation of the fauces was going on, together with her restrained position, produced slight faintness, which, however, passed off quickly.

She slept well during the following night, and the next morning felt only slight sore throat,—no more inflammation followed than was necessary for the union of the parts; the stitches were removed four days after the operation, and union was found to have taken place throughout, except the halves of the uvula, and a small piece adjoining the hard palate. The latter afterwards closed rapidly by granulations. From the first she was allowed to take nutrient fluids in small quantities and at frequent intervals, and after the 10th day could take ordinary diet.

Three weeks after the operation the palate was quite united throughout; she could swallow without difficulty, and her hearing was good; her voice appeared to have undergone little alteration, though occasionally she pronounced words on making the attempt without the disagreeable accent peculiar to these cases; showing that she was not prevented articulating correctly by structural deformity, but did so merely from habit, and only required continued and persevering efforts to overcome this in great measure.*

The concomitant deafness which occurs in these cases, is attributed by M. Deleau† to a dryness and almost

* I have recently seen this patient, and find the improvement in her pronunciation is great: it is twelve months since the operation, and during that period she has devoted herself to acquiring more correct articulation, a social position of importance to her depending on the result: she has succeeded beyond her expectations, and has obtained the end in view.

† Recherche Pratique sur les Maladies de l'Oreille.

always a chronic irritation of the mucous membrane of the throat, in consequence of its exposure to the contact of the cold atmospheric air, which chronic inflammation extends to the middle ear, while Dieffenbach attributes it, with greater justice, to the closure of the eustachian tube. That the latter is the more probable explanation is inferred from the rapidity with which the hearing was restored in this case, as in others, after the operation.

The improvement in articulation which patients experience after closure of the fissure, is not so immediate as the greater ease of swallowing, and never is so considerable as might, *a priori*, be anticipated: this is principally owing, I believe, to a want of perseverance on the part of the patient, in learning an entirely new method of pronunciation, which is attempted under great disadvantages from his having been so long habituated to the movements of articulation associated with cleft palate, and the necessity of delaying the operation till about the time of puberty.

An operation, widely different to the foregoing, and which for the sake of distinction I call the old operation, has been recently performed by Mr. Skey, in St. Bartholomew's Hospital, upon Eliza Smith, æt. 23 years. She is a stout and healthy-looking woman, who had a congenital cleft palate, implicating to a very slight extent the palate bones. The margins of the cleft were about an inch in length exclusive of the uvula, which was divided in the centre; the left flap was not quite so prominent as the right, and the corresponding margin of the fissure was a little longer. On making forcible attempts at deglutition the halves of the uvula came together, as seen by looking into the mouth. She stated, that to prevent fluids passing through the nose while swallowing, she had always been obliged to hold the head back; that her speech, which was considerably affected, had not undergone any improvement, and in her opinion was worse than when she was younger.

After waiting such a time from her admission as was deemed advisable, Mr. Skey pared the edges of the fissure with a small scalpel in the usual way, removing just enough mucous membrane to expose the thickness of the

velum at its margin. A small incision was then made from the anterior extremity of the fissure directly forwards in the middle line: after this a lancet-pointed knife was passed into the velum on its under surface, and a deep incision made, commencing near the anterior extremity of the fissure midway between the cleft and the alveolar border, backwards and outwards parallel with the margin of the cleft for nearly an inch and a half, and terminating external to the uvula. This was repeated on the other side, and the flaps were then partially detached from the bones both from the cleft and the longitudinal incisions, after which, a sufficient interval having been observed, five sutures were introduced by means of small curved needles held in convenient forceps, the same thread being passed through both flaps. The posterior sutures were tied first, the parts coming together easily, but in tying those in front there was slight difficulty experienced in drawing the parts together, it being necessary to hold the first turn of the thread by means of long forceps while the knot was being completed; and while tying these, the longitudinal incisions began to gape, but only at their anterior half: it was deemed necessary before tying the last sutures to separate the soft parts from the palate bones a little more extensively. After the closure of the cleft the anterior pillar of the fauces on the right side being tight, it was divided with a scalpel, and the part seemed considerably relieved by the incision. The operation continued a little more than an hour, and did great credit to the well-known skill of the operator, though the progress of the case is, I fear, at present very unfavourable, and scarcely promises union of any part.

[To be continued.]

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 27th November, 1851:—Charles Joseph White, Portsmouth—Charles James Morris, Hampton Wick—Thomas George Fitzgerald, Army—Charles Christopher Hewetson, Stanhope.

ON THE
THERAPEUTIC PROPERTIES OF
CREASOTE.

(Communicated to the Medical Society of
London, Oct. 18th, 1851.)

BY BENJAMIN W. RICHARDSON.
Lic. Fac. Phys. and Surg., Glas.

DURING the last visitation of Asiatic cholera, my attention was called to two short papers in the Medical Gazette and Lancet, from the pen of Mr. Spinks, of Warrington, On the good effects of Creasote in the treatment of that formidable disease. As the epidemic had nearly passed over before I read these papers, and as my attention at that time was somewhat diverted from the subject, I did not obtain an opportunity of testing the effects of creasote in the treatment of true Asiatic cholera. Since then, however, I have given this medicine a very fair trial in the treatment of *ordinary diarrhœa*, and I am bound to admit, that, as far as my own observation goes, there is no astringent remedy half so useful, in certain cases of profuse purging.

The cases in which I have found creasote most valuable are of three kinds:—

1st. Cases where purging appears, and cannot be traced to the presence of foreign matters in the intestines, as so often happens during ordinary epidemics.

2ndly. Cases where a diarrhœa follows the administration of purgative medicines given for the purpose of removing foreign matters from the intestines.

3rdly. Cases where after an acute diarrhœa, a state of passive purging continues,—the patient being constantly troubled with sudden small liquid evacuations, not attended with great pain, or any considerable constitutional disturbance.

From the first-named class of cases I could give numerous instances illustrative of the good effects of the remedy in question. During the late diarrhœal epidemic many of these cases have come before me; but, to save time, I shall only state that, in no case of the kind, have I seen the remedy fail, and

that, in most instances, from two to four doses of the medicine have been sufficient to check the evacuations.

Of the second variety I have also seen several examples. The following case affords a good illustration:—In the month of August, 1850, I was one morning hastily summoned to Chiswick to visit an aged lady, who was suffering from diarrhœa. I found that on the previous day she had been eating heartily of some kind of indigestible food, and feeling uneasy sensations in consequence, she had taken a smart dose of some aperient medicine. The effect was a profuse action of the bowels, continuing for many hours, and reducing her to a deplorable degree. At the time of my visit she presented the following symptoms: the diarrhœa was constant, the matter evacuated being thin, and but little coloured. The pulse at the wrist was nearly imperceptible, the surface of the body was cold, the lips were blue, the abdominal muscles were painfully contracted, and the voice was greatly diminished in force. I prescribed creasote two minims, with half a drachm of sulphuric ether, to be given immediately in a little syrup, and to be repeated every one or two hours. A little brandy and water was also recommended at intervals, and light mucilaginous drinks. The body to be kept warm. On calling again in the evening of the same day, I was delighted to find my patient much better; she had rallied considerably after the first dose of creasote and ether; the diarrhœa had diminished, and by this time had ceased altogether, two more doses having been given. I now stopped the medicine, and the diarrhœa did not return; for a day or two some slight symptoms of thirst appeared, but these passed off, together with the prostration consequent on so severe an illness, and in the course of three weeks perfect recovery had taken place.

Of the third class of cases I have not seen so many examples as of those previously named, but the following is one of the kind:—A gentleman who was travelling was seized with an ordinary attack of diarrhœa, for which he took medicine with much relief; still his recovery was not complete. He did not suffer from pain, but three or four times in the course of the day he would be suddenly troubled with a small liquid evacuation. This was a great annoy-

ance, and he was treated for it in various ways, by mild purgatives, and also by all the ordinary astringents, but with no avail. He returned to town and resumed his usual pursuits, but the purging, notwithstanding the most careful diet, continued to tease him. Creasote was at last prescribed, in a minim and a half dose, combined simply with syrup of tolu, and a little water. The effect was most satisfactory. The remedy was taken but twice, when the disagreeable symptoms entirely passed off. Ten days after they slightly returned; but one repetition of the dose named above effectually checked a relapse, and since then (nine months ago), the bowels have acted quite normally.

The advantages which creasote seems to possess over the other astringents, are:—1st. That it succeeds when others fail. Of this fact I am quite convinced: I have, during the late months, when diarrhoea has been so common, selected at the same time similar cases, and whilst treating one with creasote I have treated the others with opium, chalk, or some similar remedy. In such trials I have unexceptionally found the purging arrested much more readily and effectually by the creasote, and in many cases, other remedies having signally failed, this one has been prescribed afterwards with the best results. 2ndly. It is very speedy in its action. 3rdly,—and this is a great advantage,—it rarely leaves the bowels constipated. In the course of its administration I have sometimes seen it produce symptoms of dryness of the mouth, with a white filmy state of the tongue, and a little excitement. Under such circumstances the remedy is better discontinued; indeed it is not often wanted after these symptoms, inasmuch as the diarrhoea is usually checked before the appearance of them. With children the remedy is also useful; but, to secure success with them, the dose must be very small,—the one-fourth, one-sixth, or one-eighth of a drop to children under two years, is sufficient. With adults from one to two drops is the dose I usually prescribe, and this may be repeated every two or three hours for several times if required.

I am happy to see that the value of creasote as a remedy for diarrhoea has not escaped the notice of other observers. In the last volume of the

LONDON MEDICAL GAZETTE, there is a paper by Mr. Kesteven on this subject, in which he praises the remedy greatly. Mr. Kesteven also offers the theory, that the good effects of creasote in diarrhoea may arise from its power in coagulating albuminous solutions. There is, however, a great objection to this theory, in the fact that to coagulate albumen a large quantity of creasote is required; so that the small doses medicinally administered cannot be supposed as sufficient to produce such coagulation in the intestines.

I must just add one word with reference to some of the other therapeutic properties of creasote. In elementary treatises on therapeutics, I find ascribed to it, narcotic, sedative, and diuretic properties. To none of these effects can I myself bear witness. I have never seen the least approach to narcotism or diuresis on any occasion, from the doses named above; while, on the circulation, I am quite sure it acts rather as a stimulant than as a sedative. Its power to arrest vomiting depends upon the dose given in a full dose, two drops, I have seen it even bring on vomiting; in which case a few minims of dilute hydrocyanic acid are usefully combined with it. At the same time, I may observe that I have seen diaphoresis follow its administration, and that it possesses very excellent antispasmodic properties. I have also found it very useful in arresting hiccup in cases of exhaustion. To disguise the nauseous qualities of creasote, no vehicle seems to me to answer so well as the syrup of Tolu, to which compound tincture of cardamoms may be added. It is also very advantageously combined with opium, or with the preparations of ether, in cases where these remedies are indicated.

In concluding this notice of some of the properties of creasote, I have only to observe, that I do not speak of its effects from a small number of cases, or a short period of trial.

I have tested the remedy impartially for many months, and, having thereby formed so favourable an opinion of its use, I have considered the matter as one of sufficient interest to be brought before the notice of this medical society.

DESTRUCTION

OF ALMOST THE

ENTIRE TEMPORAL BONE—

SLOUGHING OF THE DURA MATER—AND AN OPENING ESTABLISHED INTO THE LATERAL VENTRICLES BY SLOUGHING OF THE CEREBRAL TISSUE.—DESTRUCTION OF THE 7TH AND 8TH PAIRS OF NERVES.

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MRS. PEYTON, aged 66, a nurse. I visited her, as a patient of the Birmingham Dispensary, at the request of Mr. Figgins, on August 10th. She gave me the following history:—

She was attacked with pain in the right ear about six months ago; she attributed it to exposure to very bitter weather, after having been in a hot room; immediately after the pain set in, she found a swelling in front of the ear. About a fortnight afterwards she struck her ear against a bracket; the pain became much increased, and in a day or two "a gathering broke," discharging profusely through the auditory passage. The pain was relieved temporarily, but soon returned, and with the discharge has continued ever since. The discharge consisted of fetid pus, frequently bloody, or very thin; and occasionally of pure blood, to the extent of a meat-spoonful. About a fortnight before I visited her, a piece of bone "like the mallet bone" came away. The pain has been constant, at times intense, particularly if the discharge ceased for a day or two; she described it as starting from the front of the ear, and radiating over the right side of the head, and across the occipital region, where it was most severe. She often passed hours clasping her head between her hands. On March 30th, two months after the commencement of her complaint, her attention was first called to the existence of some paralysis of the right side of the face.

She has always enjoyed excellent health; has never before had discharge from her ears; though I learned since her death that she had long had a habit of picking her ear with a pin, but without ever complaining of any uneasiness there. Her family is free from

consumption, nor is there any trace of syphilitic affection in her history.

At my visit I found the tragus and the cartilage of the auditory passage of the right ear greatly thickened, and quite raw, from the discharge; and immediately in front of the tragus there was a diffused soft swelling, not especially tender, and not fluctuating; there was a draining of fetid sanious pus from the auditory foramen. The right side of the face was partially paralysed; the muscles supplied by the portio dura, and also the buccinator; but the paralysis was not perfect, as the eye could be partially closed voluntarily, and perfectly during sleep, and as food did not collect in the cheek, though the cheek hung loosely, and flapped when she talked, considerably impairing her articulation. The power of masticating was a good deal impaired; she could only chew sopped food; but from the disease about the root of the zygoma, it was difficult to say whether any share could be referred to impaired power in the muscles of mastication. The right side of the tongue was quite insensible, but the other parts supplied by the sentient branches of the fifth retained perfectly the power of distinguishing impressions. The senses were unaffected, except that of course the right ear was quite insensible to sound. The pupils were natural; there was no sign of paralysis elsewhere; but her arms were rather tremulous, owing to the remains of gilders' palsy, although it is many years since she worked at gilding.

When I first visited her, I found her subject to fits of a kind of maniacal excitement, with great depression of power,—owing, most probably, to want of rest from her constant suffering. My friend Mr. Bindley, who assisted me through the case, having found that a probe passed through the cartilage of the auditory passage, and moved about with much freedom over the neighbourhood of the root of the zygoma, made a free incision upon the point of the instrument: he then felt a considerable extent of exposed bone. Discharge passed freely through the opening during the remainder of her life; and about a fortnight before she died a large piece of bone came away.

It is unnecessary to detail the history of her case further than that the suffering continued with great severity, partially mitigated by large opiates repeated

at short intervals, and by extract of belladonna rubbed over the painful regions. The facial paralysis became complete: the buccinator was perfectly palsied, and the conjunctiva of the right eye congested and œdematous. Her intellectual functions were unimpaired, with the exception of occasional nocturnal delirium during the last fortnight. She died October 6th, rather unexpectedly, having been sitting up the day before.

Sectio cadaveris 40 hours after death: present, Mr. Bindley, Mr. Carter, Mr. Figgins, and myself.—The head alone was examined. On the right side, the integuments and external ear were separated from the bone as far backwards as the mastoid process, and below to the further part of the base of the skull; the inner surface of the interspace was in a state of slough, and emitted a most fetid stench. We found the entire squamous portion of the temporal bone, except a small piece of its upper part, entirely destroyed, and with it a part of the mastoid portion, laying open the mastoid cells; a large irregular opening was thus formed through the side of the skull. The petrous portion of the temporal bone was also destroyed, leaving only a few broken-down fragments, and a mere shell attached to the basilar process: an extensive sloughy cavity was thus formed at the base of the skull, extending almost to the vertebræ, enclosed by the remains of soft parts, covered with flabby, unhealthy granulations. Through the upper part of this cavity, that portion of the facial nerve which is enclosed in the aqueduct of Fallopius passed uninjured, but fully exposed by the total destruction of the bone; this was the only part of the nerve that remained; it terminated at either extremity in a mass of granulation.

The dura mater adhered to the bone nearly to the edge of the large opening; its outer surface, where exposed by the destruction of the bone, was sloughy; it was perforated by an opening, the size of a crown-piece, which corresponded to the commencement of a sloughy sinus through the substance of the brain; at a very small distance from the opening the tissue of the membrane became quite healthy, the orifice of the internal auditory meatus remained, though unsupported by any bone, and without any remains of nerve. The

lateral sinus, where lying upon the mastoid portion, was plugged with fibrine of a dirty colour, firmly adherent; it did not contain pus; by this clot the closure of the vessel in the jugular foramen was complete. The eighth pair of nerves entered the jugular foramen as usual, but, on the under surface of the skull, the sloughing had removed every trace both of the jugular vein and of the nerves. The carotid artery was healthy; though deprived of its bony sheath, it was enveloped in a dense casing of granulation. The fifth pair of nerves was entire within the skull, but enclosed in a very dense thickened sheath, which must have exerted considerable pressure upon the nerve, and perhaps was one great cause of the intense pain; but here our dissection was incomplete; under the circumstances it was impossible to dissect the nerve after passing into its foramina on the under surface of the skull.

Brain.—From the opening in the dura mater, a sloughy irregular passage led, through the substance of the brain, into the lateral ventricle, which was quite full of sloughy débris, and contained some thin pus in the lowest part of the posterior cornu; the left ventricle was almost as full as the right, apparently from the breaking down of the septum lucidum; the lining membrane of both ventricles was healthy, the sloughy matter being derived from without. In the neighbourhood of the sloughy passage the brain was a good deal softened, and implicated with foul pus; but in all other parts it was healthy. The surface of the right corpus striatum had been infiltrated, but the destructive process had not penetrated to any depth. The arachnoid and pia mater were healthy, except near the sloughing part: there were about two drachms of thin purulent fluid at the base of the brain.

It is impossible to trace the origin of the disease in this curious case; the account given by the patient would certainly lead one to infer that it did not arise within the ear, but probably in the seat of the swelling, which was noticed so soon after pain began: but the history I obtained from her was more meagre than I could wish. The absence of all cerebral symptoms is explained by the fact of the great

ganglia of the brain remaining intact, and by the probably slow progress of the disease within the brain; for instances of *acute* softening speedily fatal, after having involved a much smaller amount of cerebral substance, are not rare.

The small amount of disturbance following the division by sloughing of the pneumogastric nerve affords a comment on the like result of dividing one nerve by Dr. Reid.

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ENCEPHALOID DISEASE OF THE LIVER AND STOMACH. PULMONARY APOPLEXY; WITH RUPTURE INTO THE PLEURAL CAVITY.

DR. JACKSON reported the case, which occurred in the practice of Dr. Allen, of Cambridgeport, and which he examined a few days ago. The patient was a farmer, aged fifty-four, and of robust health, except that for several years he had been subject to lead colic, the lead pipe that supplied his house with water being very much corroded; there was also the characteristic blue line about the patient's gums. Last April he took, for an obstinate attack of constipation, very active cathartics, and at last croton oil; this was followed by intense pain in the abdomen, which lasted for several hours, and more or less for some weeks. From that time until his death he complained of distress, and often of urgent pain in the region of the liver, tenderness on pressure over the organ, and a sense of weight so that he was unable to lie upon the left side, and often, when sitting up, was obliged to incline forwards upon the back of a chair; the distress he often compared to constriction as from a cord about the waist. The liver was felt to be enlarged when Dr. A. saw him about six weeks ago, and increased considerably in size before death; dej. clay-coloured at that time, but under the use of the hydriodate of potash the colour soon became natural; skin never yellow; never complained of his stomach, appetite sufficiently good until the last three weeks, and he even ate a slice of boiled beef four days before death, and bore it well. This comparative latency Dr. J. has observed in several other cases of carcinoma of the stomach, where the disease seems to have supervened upon that of the liver. No hæmoptysis, nor any other symptom tending to a suspicion of pulmonary disease. Patient became much emaciated; but kept about until three weeks before death, from which time he was confined to his bed.

On dissection, the liver weighed about nine pounds ten ounces, and was filled with encephaloid masses of about the average consistence, contrasting strikingly with the case last reported, as it did also in the fact of there being nowhere any effusion of blood in connection with the carcinomatous deposit. There was also another striking difference between this case and the other, in regard to old peritoneal adhesions, which here were universal between the liver and the diaphragm. Such adhesions Dr. J. has rarely, if ever, observed in other cases of this disease, and he is disposed to connect the fact with the local symptoms, of which the patient had complained so much during life; the disease, when confined, as it usually is, to the interior of the organ, being not unfrequently met with when nothing had led to a suspicion of its existence.

The pyloric portion of the stomach was pretty extensively carcinomatous, with ulceration, which penetrated into the muscular coat, the structure being whitish and condensed; the cellular membrane and lymphatic glands in the neighbourhood were also affected; and there were traces of the disease upon or beneath the diaphragmatic pleura on the right side, and the peritoneal surface within the cavity of the pelvis.

The left side of the chest was observed to be somewhat enlarged, and very resonant on percussion; and on puncturing it there was a free escape of inodorous gas. The cavity contained five or six ounces of nearly pure blood, and over the anterior portion of the lower lobe was a thin, filmy deposit of fibrin, apparently from the effused blood; there being no appearances of pleurisy. Beneath this fibrinous deposit the pleura was stripped up to some extent, and in the substance of the lung immediately beneath it was a ragged cavity, which, though empty, was capable of holding two or three ounces; the surrounding pulmonary structure being more or less infiltrated with blood; into this cavity the air entered freely from a neighbouring bronchus on inflation. Pulmonary apoplexy was also found to a considerable extent in the back part of the upper left lobe, and to some extent in different parts of the right lung, but without any further breaking down of the structure. Dr. J. had never before met with laceration into the pleural cavity in those cases, but referred to Cruveilhier's remarks upon its occurrence. The other organs were healthy.—*American Journal of the Medical Sciences*, 1851.

MEDICAL GAZETTE.

FRIDAY, NOVEMBER 28, 1851.

WITH all due deference to antiquity, and to those institutions which have stood the test of time and the criticism of ages, we cannot but feel that when a custom has really outlived the necessities which gave it birth, it should be given up; not hurriedly, but with that quiet resolution which so distinguishes our national character. We have the very highest respect for that great medical society (the first in rank as in general estimation), the Royal College of Physicians, but we are sure that most of our readers, as well as most of the fellows of that learned body, will agree with us, that it has not advanced in many particulars of feeling and usage with that energy and progress which the age requires, and which the public have a right to expect. We are aware that many difficulties stand in the way of the progress of a long established body, which do not beset the path of institutions recent in their origin and unfettered by the associations of antiquity. We should be sorry to see a society which bears about it the character of a venerable experience, imitating the vagaries and hazardous experiments of more youthful institutions; but still, if the College is to maintain its position at the head of the medical world, it must exhibit greater signs of vitality.

Recent events have unmistakeably given this intimation with a voice, we grant insinuating and quiet enough, but, for all that, the more dangerous and portentous! What is the meaning of the continued little slights that the College has received from the Government? How is it that they were so slighted in the matter of the Cholera

Board? How is it that they have been so slighted, we might say ill-used, in the appointment of an English Medical Commissioner on the Quarantine question? Not to bring forward other instances of a similar nature,—each fellow of the College can answer the question, that it is because the College does not hold that position in the opinion of the public which it ought to hold; that, notwithstanding its many efforts at reform, it still possesses the character of immobility, and is suspected rather than trusted.

Now that the principle of protection is esteemed mere Quixotism; that its advocates are (with great point and truthfulness) compared by an eminent daily contemporary, to the ragged band of Jacobite Highlanders who endeavoured in 1745 to overturn an empire so strong that its only danger lay in contempt for its foe; now, that the principle of free-trade has been established and indelibly illustrated by the glories of the Great Exhibition, let not any institution imagine that it can any longer set public opinion at defiance with impunity.

But to descend to particulars, one circumstance in connection with the *examinations* at the Royal College of Physicians appears to us to demand particular attention, namely:—Why should the candidates for the license *intra urbem* and *extra urbem* require two examining boards? Are not the censors sufficient for all? Is it not advisable to do away with the impression, too generally spread, that the candidate for the diploma of extra-licentiate can obtain it with a much slighter examination than the candidate for the diploma of licentiate? Why should we decree one rule and standard for the physicians of Manchester, York, and Birmingham, and another for those of the metropolis? The custom must have arisen in days when a broad

line of demarcation existed between the polished denizen of London and his ruder provincial brother; but railroads, common-sense, and a few other influences, have put an end to these artificial divisions. We acknowledge with much satisfaction the fact that the College has already seen the propriety of raising very much the examination for the extra licentiate; for whereas a short time ago no paper work was given, now the same papers are given as in the examination by the censors: a single day's *vivâ voce* examination was considered to be sufficient, and this we can easily imagine was sorry work enough.

But we ask again, why need there be any distinction? Would it not be far more consistent that the College, which is willing enough to see the propriety of having a single central board for the examination of general practitioners, should at least insist on having a single board for its own Licentiates; and we would ask any Fellow of the College if he does not think it probable that the Board of Censors must be far more suited to act as examiners than the Elects. It is almost needless, and perhaps somewhat invidious, to draw a comparison between the two, but we must nevertheless recall to the mind of our readers, that the Censors are a board selected out of all the Fellows for their suitability to the office, and that they are men generally in the prime of life, some of them even younger (and therefore in many respects even more suited for the office of an examiner than their seniors, inasmuch as they are fresh from the schools), and that they are changeable every year, and, in consequence, give an ample opportunity for a fresh importation of learning and originality from time to time. The Elects, on the other hand, consist of those eight senior Fellows of the College who have practised their profession in

London, and maintained an honourable position amongst their brethren. Any man who is esteemed to be at all suited to hold a position of medical honour is selected in rotation for this office; so that, unless illness, retirement from the profession, or some other manifest cause stands in his way, it is esteemed somewhat of a slight not to be elected. A most respectable body is by this means, no doubt, created to stand at the head of the College—one suited to do it honour in many ways, where professional status and social rank are required; but, we may say with truth, not peculiarly suited to act as examiners. We all know that elderly gentlemen are naturally more lenient than their juniors, are of necessity less mixed up with the progress of the day, and are (they will pardon us for adding) somewhat oblivious of that knowledge in which they were themselves once versed. The *otium cum dignitate* of their period of life,—a condition which we most of us desire at some time to enjoy,—is, to say the least, inconsistent with the constant toil and investigation necessary to make a good examiner of the over-crammed student of the present day. These gentlemen, moreover, may go on till they are eighty, or as long as they can sit up at a table; and thus there is little chance of the infusion of fresh knowledge into the Board—little chance of interruption to the periodical questions so readily prognosed, and so glibly responded to. We need not say more on this subject: ask the elects themselves if they think they are the best constituted board for examining for a diploma. We respect them highly for their position: we should be sorry to see any office of honour, at present conferred on seniority and a long unsullied reputation, violently tampered with; but we think they are out of place as examiners. We consider it most desirable to have

but one board, and if the present distinction of examinations is maintained only because it rests upon some ancient necessity, the cogency of which is not very apparent at the present day, we call upon the College, as the first step in salutary reform, to abolish this obsolete custom.

CONSIDERING that the saying, "the British Merchant Service is the nursery of the British Navy," has come to be received as an established fact, we cannot help thinking that successive governments have in times past manifested on certain points much indifference to the welfare of their naval nurselings. A better time has, however, at length arrived, and past neglect is about to be amply atoned for.

An Act received the royal assent in the last session,* which contains some very judicious and salutary clauses, having reference to medical and hygienic questions.

The clauses to which we allude provide—

1st.—That every place, in any ship, occupied by seamen or apprentices, shall have a space of not less than nine superficial feet for every adult, measured on the floor or deck of such place, kept clear from stores or goods of any kind, securely constructed, and properly ventilated; the Owner being under a penalty of twenty pounds, and the Master ten pounds, for every neglect thereof.

2nd.—That the Board of Trade, and Local Marine Board, shall appoint proper Medical Inspectors, to inspect the medicines, lime or lemon-juice, sugar, and vinegar, required by law. And that if any such Medical Inspector shall report to the Collector or Comptroller of Customs in any port, and at the same time to the Master, Owner, or Consignee of any ship lying therein, that in such ship the said articles or

any of them are deficient in quantity or quality, or are placed in improper vessels, the Master of the said ship shall, under penalty of twenty pounds, before proceeding to sea, produce a certificate from the said Inspector that such deficiency, &c., &c., has been supplied or remedied. The inspection must be made at least three days before going to sea, and shall not be made again unless the Inspector has reason to think that the articles inspected have been removed or injured.

3rdly.—A penalty of twenty pounds is incurred by any person who shall supply any of the aforesaid articles of a bad quality, for the use of the said ships.

4thly.—Proper weights and measures shall be kept on board the ship for serving out the said articles.

5th.—Every case of illness, injury, or death, shall be entered in the Official Log Book, and the entry shall be signed by the mate or eldest seaman, or by a surgeon or other medical man, if any such be on board.

The Board of Trade likewise, under other enactments, has power to enforce a due regard to the appointment of medical officers, and the supply of medicines for emigrant ships.

If, then, these wise laws be carried out with the strictness and promptitude which their need dictates, much good may be done. The health and lives of our merchant seamen will be less at the mercy of unprincipled purveyors of ships' stores than they have heretofore been. We have often been convinced, by experience, of the paramount importance of official inspection of the medicines supplied to merchant ships, and of the necessity for sufficient power to enable the inspectors to see that their suggestions shall be carried out.

These regulations will speedily come into operation; the Inspectors will be appointed without loss of time. In those appointments the testimony of the medical profession to the competency of the individuals who may seek them will necessarily have much weight with

* "An Act for improving the condition of Masters, Mates, and Seamen, and maintaining Discipline in the Merchant Service."—13th and 14th Victoria, cap. 93.

the authorities: we trust, therefore, that our brethren will duly consider the great importance and responsibility that attach to their recommendations. Unless men of integrity be entrusted with these duties, the law may be rendered null and void, or a vexatious and tyrannical power, opening the door to dishonesty and fraud, may be thus exercised over the owners and masters of ships.

AN application was made to the Lord Chancellor last week for the payment, out of a lunatic's estate, of a fee of fifty guineas to Dr. F. Winslow, for his examination and report on the condition of a lunatic.

In refusing the application, the Lord Chancellor remarked,—*That in the present instance, as was likewise almost always the invariable practice, the medical man had reported in favour of the views of those parties who had employed him.*

It is with regret we find that one occupying the high position of the Chancellor has thus given expression, in a judicial capacity, to so illiberal an opinion on the conduct of medical witnesses. Surely his Lordship's experience and acquaintance, as Mr. Sergeant Wilde, with numerous eminent members of our profession, must have given him a better knowledge of medical character. A little reflection would, we are sure, enable him to perceive that, whether in reference to the case submitted to his decision, or to the general practice of respectable medical witnesses, the imputation conveyed in these remarks is as unfounded as it is untrue.

Reviews.

Lectures on the Principles and Practice of Surgery. By BRANSBY B. COOPER, F.R.S., Senior Surgeon to Guy's Hospital, &c. 8vo. pp. 964. London: Churchill. 1851.

WE have on many occasions expressed our regret that Hospital Physicians and Surgeons should so frequently pass through long and active lives without giving to their generation the benefit of the great amount of experience which their opportunities have afforded them. Mr. Bransby Cooper, it is evident, has looked upon the prominent position which he has for so many years occupied among metropolitan surgeons, as a trust held by him for other than the mere selfish object of personal aggrandizement. He has, we may fairly assume, considered himself to be under an obligation to extend the knowledge gained during a service of a quarter of a century as surgeon to Guy's Hospital, beyond the immediate recipients of his skill, within the walls of that establishment, or even the auditors of his usual courses of lectures. We think that Mr. Cooper has done not only wisely, but justly, in the publication of the present volume, as it cannot fail to possess great practical value. It will be as well that we should quote from the preface the author's intentions:—

“It may be considered by many that a book upon surgery is not at the present time one of the desiderata of the medical profession; and such a remark, would, I think, be quite true, if it were intended to apply to a work on the abstract principles of the science. It is not without mature deliberation that I have determined upon publishing the present volume; but I have come to the conclusion, that as its contents are of a practical character, embodying the experience of twenty-five years, during which time I have occupied the position of Surgeon to Guy's Hospital, it would be found useful, not only to the student, but also to those who have entered upon the practice of their profession. It must be borne in mind, that it has not been my intention to write a systematic work on the elements of the science of surgery. These lectures were originally delivered before my hospital pupils; and in thus presenting them to the profession in a collected form,

my object has been to furnish a useful compendium of surgery, in which the student may meet with a clear account of the practice of that science, established, not only on my own experience, but likewise upon the best acknowledged authorities. That the practice may not bear in some cases the character of empiricism, I have endeavoured, so far as I have been able, to lay down the general principles of science upon which the practice is based; at the same time I have avoided as much as possible any discussion of the hypotheses of the time, deeming my practical book an unfit medium for such matter."

In pursuing the plan which the author proposed to himself to follow in these lectures, the first subject brought under the reader's notice is that of the *Blood*. Mr. Cooper begins with this, because of the various important purposes which that fluid fulfils in the maintenance of health and restoration from disease, and a knowledge of which he justly considers will help very materially to an acquaintance with the changes to which it is liable under various morbid influences. The author intentionally does not enter deeply either into the chemistry or physiology of the blood, but merely brings under notice those points which have direct reference to practical considerations; viz., its quantity, composition, and the changes it undergoes when drawn from the vessels.

The pathology of the vessels, and *Inflammation*, follow, and are discussed in brief space, bringing under notice, however, those points which interest the practical surgeon.

The lecture on "Irritation," by which name the author speaks of disease set up in parts distant from the local cause, or secondary fever following on some local injury, may be taken as affording an excellent illustration of the author's instructive and impressive manner of teaching. Every point of any importance is aptly illustrated by the relation of some case, occupying, it may be, only a few moments in the narration, but clearly presenting the striking point of principle or practice to be impressed upon his hearers.

"Secondary fever," the author remarks, "is only to be distinguished from idiopathic fever by strict investigation into the cause and history of the symptoms which first indicated a deviation from health, and which may prove sufficient to form a diagnosis." Mr.

Cooper considers it to be very questionable whether *idiopathic* fever ever really exists. We agree in this doubt,—the cause may be obscure; but it is generally developed during the progress of the fever, or is rendered plain by subsequent post-mortem revelation. The first is frequently seen in puerperal fevers of a phlebotic origin; the second in typhus, or in the "irritative" fever following upon surgical operations.

The influence of habits of life in disposing to the production of irritative fever after slight injuries, is seen in the well known instances of the London draymen, with whom a slight scratch has been sometimes known to have ultimately terminated in death.

Mr. Bransby Cooper relates several very instructive cases of *tetanus*, without being able to add to our previous therapeutic resources in the treatment of this disease; all the most powerful remedies of the Pharmacopeia have been found equally inefficacious. We have ourselves, in an idiopathic case, seen beneficial results follow on the exhibition of full doses of morphia, turpentine enemata, and counter-irritation to the spine. The cause of the disease in this instance appeared to have been cold, by which the vital powers were depressed—the patient having slept in the open fields on a frosty night. The cure was complete, and the patient lived to be transported for theft perpetrated upon one of his neighbours who had ministered to his need when suffering under tetanus.

The principle of the treatment of *gunshot wounds* has long been divested of the mysterious difficulties which do not belong to the subject, but which were assumed in the darker times of surgical science. The author very justly observes:—"Gunshot wounds differ from others only in the complete destruction of the parts which are struck, and resemble, in fact, severe lacerated and contused wounds from any other cause." The practical deduction from this scientific principle is, that their treatment must be conducted "in a similar manner to ordinary contused wounds."

Mr. Cooper points out the importance, in practice, of attending to the three points judiciously indicated by John Hunter; viz.:—1st. The greater the velocity of the ball, the straighter will be its course through the body." 2ndly. "The greater the velocity of the

ball, the more the wound will approach to the nature of an incised wound." 3rdly. "The greater the velocity of the ball, the greater will be the danger of hæmorrhage."

Gunshot wounds the author teaches, are merely contused wounds which may be simple or compound according as the ball passes only through soft parts or penetrates the cavities of the body, or wounds an artery, or fractures a bone. Mr. Bransby Cooper gives the following illustration of the difference between a gunshot wound and a contusion:—

"We know chloride of nitrogen and gunpowder both to be most explosive bodies; the former, however, is reduced to its constituent elements in a space of time infinitely shorter than the latter, and with a force much more suddenly excited, and at first sight apparently greater, but the real amount of force generated is probably in favour of the latter, while the initial velocity communicated is probably in favour of the former. You may easily demonstrate the difference of the action of these two substances. If a few grains of chloride of nitrogen be placed upon an earthenware plate, and exploded, a clean round hole is made in the plate without producing even a crack in it. Explode a similar quantity of gunpowder in a plate, and, if not confined, it produces no effect; but, if confined in action, it smashes the plate all to pieces. Thus, in gunshot wounds, the velocity is so great, that it annihilates the cohesive force of the atoms of the matter on which it impinges, before there is time for the elastic force of the surrounding matter to come into play to resist it, and the destruction is confined to the immediate path of the ball; while in contusions from a spent ball, the velocity is less rapid, and before the force can overcome the cohesion, the elasticity of the structure comes into play, and then affords a resistance which prevents the ball from forcing an entrance. At the same time, so large a surface of matter has been brought into action to resist the ball, that the shock is far more widely felt than in the former case." (p. 93.)

Burns and scalds, suppuration, ulceration, mortification, and erysipelas, form the subjects of the five succeeding lectures. The three following are occupied with diseases of the bone; and present, as may be supposed, a very brief, although lucid, condensation of so extensive a field of pathology.

The following extract presents an illustration of the clear and practical

manner in which the author brings under the notice of his readers the chief points in the surgical treatment of injuries of the skull, among fractures of the bones.

"Suppose the surgeon to be called to such a case three hours after the accident has occurred, what should he do? This is a most important question, and one difficult to be answered. It is true, we judge, from the history of the case, that extravasated blood is the cause of the symptoms, and we have reason to hope that by trephining the skull the cause of danger may be removed. This seems simple enough; but where is the trephine to be applied? There may or there may not be marks of violence on the scalp, showing the part which has sustained the injury; or, even if there be, it is not certain that that is the point at which the blood is extravasated; the effusion may indeed have taken place at exactly the opposite side of the skull, from the effects of '*contrecoup*.' I should not, therefore, recommend the immediate use of the trephine, but first the employment of strictly antiphlogistic means; bleed, purge, and apply cold to the head, and a blister to the nape of the neck. Should the symptoms not subside upon the treatment, and a distinct puffiness of the scalp exist, either at the part where the blow was inflicted, or at the opposite point of the skull, an incision should be made through the pericranium; and if that be readily separable from the bone, and the skull itself be dry, and of an ashy colour, it is pretty certain that the extravasated blood is immediately under the exposed bone, which should therefore be removed by the trephine" (p. 229).

The entire subject of fractures extends over six lectures. We quote another passage from this part of the volume:—

"I subjoin a series of experiments which I made in order to ascertain the precise nature of the change which the neck of the thigh-bone undergoes in old age, that I might discover the cause of its tendency to fracture from such slight injuries as are known to produce its solution of continuity. The specimens of bone were selected with great care, and portions being sawn off, were weighed, and then burnt in a muffle, so as to destroy the whole of the organic matter, and, being again weighed, the result was recorded. The quantity of bone taken in each case weighed from 150 to 300 grs. The relative proportion of phosphate and carbonate of lime was ascertained in several instances, but no perceptible difference was observed."

"The following table presents the average of six experiments in each case :—

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| Recent neck of old femur | 31.3 | } per centage of bone-earth |
| Shaft of same bone | 53.3 | |
| Recent neck of femur, middle | 50.1 | |
| age | 50.1 | |
| Shaft of same bone | 56.7 | |

"So that it appears that, although the recent neck of middle-aged bone contains 50 per cent. of bone-earth, yet the recent neck of old bone yields only 31 per cent.; while, at the same time, the difference between the shaft is by no means so great" (p. 282).

From these facts the author proceeds to reason upon the improbability of bony union, especially in the epiphyses of bones after the middle age of life.

Four lectures embrace the subjects included in the consideration of *dislocations*, their pathology and treatment. Under the latter head the author differs from the opinion of a very eminent surgical writer with regard to the point at which the extending power should be applied. Mr. Cooper remarks :—

"Some surgeons recommend that the extending force should be applied at the extremity of the affected limb; but, although increase of power is thus gained, there is danger of injury to the structures of the intervening joints."

Mr. Skey* considers that he has fully established the advantages of the plan here referred to, and has found it practically to be unattended with the dangers to which Mr. Cooper adverts.

The remainder of this work is occupied with the special surgery of the several regions.

In the preceding observations, and quotations, we have sought to convey to the reader an idea of this truly practical, and, at the same time, scientific work on the principles and practice of surgery. A more intimate acquaintance therewith will satisfy the student and the practitioner that they may safely consult this volume for practical guidance, and for general information on the present state of the science of surgery.

* Operative Surgery.

The Principles and Practice of Obstetric Medicine and Surgery in reference to the Process of Parturition. By F. H. RAMSBOTHAM, M.D. &c. Third edition enlarged. 8vo. pp. 726, with 120 Illustrations on Steel and Wood. London: Churchill. 1851.

DR. RAMSBOTHAM'S work is so well known, and so highly approved by the profession as a work of reference and authority in obstetric medicine and surgery, that we need do little more than direct the notice of our readers to the publication of a third edition. On a former occasion we remarked, that in a practical point of view, Dr. Ramsbotham's treatise is one of the best in the English language. The present edition not only deserves this laudatory judgment, but we must give credit to the author for having kept his work up to the level of obstetric science, and for his earnest endeavour to make his treatise perfect both in precept and illustration. With regard to the engravings, they are so numerous, so well executed, and so instructive, that they are in themselves worth the whole cost of the book. As we have remarked in our former notice, they are in the first style of excellence, and are creditable to author, engraver, and publisher.

Our space will allow us only to glance at the additions to this volume. They include the use of galvanism in lingering labours,—the turning of the child in head presentations, and the removal of the placenta before the child in placenta prævia. The differences between the true and false corpus luteum are also illustrated by an additional coloured plate.

One of the most important additions is the chapter on *Anæsthesia* in labour. We have read this with considerable interest, and in our judgment it presents a strong but faithful picture of the evils which have resulted, and are likely to result, from the general employment of chloroform and ether in parturition. The author strongly denounces the practice, and proves its danger even from the statements of its staunchest advocates. We can imagine that this chapter will produce a storm of indignation from anæsthetic obstetricians; but we admire the courage of Dr. Ramsbotham in thus opposing reason to prejudice, and in showing, by fair logical deductions, that we are not justified in making women *dead drunk* to ease them of temporary

physiological pain. The conclusions of the author respecting the injurious effects of this practice are all the more important because he has evidently given to the subject constant, deep, and anxious consideration. It is with satisfaction we notice that the pages of our journal have afforded him an abundance of facts to illustrate his views.

We do not feel it necessary to offer any remarks upon the other additions to this edition, and we conclude by stating our opinion, that either to the obstetric student or practitioner this treatise will be found invaluable, both for instruction and reference.

Physiological Researches By Sir BENJAMIN BRODIE, D.C.L., F.R.S., &c. Collected and republished from the Philosophical Transactions. 8vo. pp. 146. London: Longmans. 1851.

MANY of our readers are doubtless better acquainted with Sir B. Brodie's *Physiological Researches* by the frequent quotations from them which are to be found in all scientific works of repute, than by the actual perusal of the papers in the Transactions in which they were originally published. It is therefore satisfactory to be able to announce that they are now procurable in a collected form, and we doubt not that they will find a place in every medical library.

The subjects to which the essays and experiments refer are—1. and 2. The Influence of the Brain on the Action of the Heart, and the Generation of Animal Heat. 2. On the Mode in which Death is produced by certain Vegetable Poisons; and 3. Observations and Experiments on the Action of Poisons on the Animal System.

As it is now nearly forty years since these papers were first published, the progress of medical science has of course in some degree altered the aspect in which the deductions from the experiments should be viewed. The facts remain the same; and they furnish, we may remark, a valuable model for imitation to all unbiassed physiologists, devoted not to the realisation of particular theories, but to the investigation of truth. The author remarks in his preface, that, in some instances, his conclusions have been confirmed by modern discovery: in other instances he has found it necessary to modify his opinions.

For the purpose of showing the relation between his original researches and the results since observed by other experimentalists, Sir B. Brodie has appended notes, in which subjects of great physiological interest are brought under the notice of the reader.

We are quite certain that the reprint of these "Researches" will be most acceptable to the reading and inquiring portion of the profession. They will prove to them that one of the first surgeons of the present day was the accomplished physiologist of a preceding generation; and that the lapse of nearly half a century has not diminished the thirst for medical knowledge, or the desire to improve medical science.

Report of the Proceedings of the Pathological Society of London. Fifth Session, 1850-51. 8vo. pp. 196. London: Bentley. 1851.

THIS work, containing notices of all the specimens submitted during the past session of the Pathological Society, constitutes a most important body of pathological data. The plates and woodcuts which accompany the volume add greatly to its value. The labours of the members of this Society have contributed very largely to the advancement of medical science; and by the publication of the present volume they have added greatly to our knowledge of pathology.

POISONED CONFECTIONARY.

It may be as well to call attention to the fact, that the liquid sold under the name of "*Essence of Jaryonelle Pear*," and employed by confectioners to give a delicious flavour to the articles in which they deal, is an artificial compound prepared by distilling oil of grain, or Fusel-oil, with acetate of potash and sulphuric acid. It is a limpid volatile liquid, having an ethereal aromatic odour, and boiling at 257°.* The editor of the *Pharmaceutical Journal* states that a child on two occasions became partially comatose, with livid lips and feeble pulse, after eating some confectionary which it was calculated contained about *one drop* of this essence.

The wholesale poisoning of children is a matter of little importance among confectioners, so that they can promote the sale of their goods by giving them a tempting colour or flavour. Thus, to Scheele's green and essential oil of bitter almonds, may now be added another compound for flavouring and poisoning confectionary.

*For a further account of this liquid see *Pharmaceutical Journal* for November, page 214.

Proceedings of Societies.

MEDICAL SOCIETY OF LONDON.

DR. MURPHY IN THE CHAIR.

Nov. 15, 1851.

New Method of Treating Diseased Joints.

MR. GAY commenced his paper by observing, that to the present time there was no department of surgery in which the powers of art have been comparatively so feeble as when applied to the relief of those diseases of the joints, which, from their results, might be termed destructive. Hence, let the articular surfaces of the joint be bereft of their cartilages, a sinus or two be formed around it, and the health of the patient show symptoms of exhaustion, and the joint, and probably the whole limb, is doomed to amputation. He adverted to the causes of the removal of the cartilage from joints, and gave it as his opinion, that in addition to primary synovial and osseous disease, the cartilages were sometimes removed by absorption, in consequence of degeneration of their own tissue, without any traceable affection of the contiguous textures. In all cases of removal of cartilage the tissue degenerates into a kind of fibrous texture, antecedent to the final process; and as portions of cartilage were sometimes observed to be removed without any apparent disorder of either the synovial or osseous surfaces, and, moreover, as cartilage was known to be inadequate to its own repair, Mr. Gay thinks it most probable that the portions of cartilage so removed had first spontaneously degenerated, and then become absorbed. Mr. Gay went on to remark, that if a series of joints be examined in which the removal of the cartilages is taking place, the appearances will be as follows:—If it be presumed to follow disease of the synovial capsule, the cartilage will be found in some to maintain its connection with the bone, whilst it is thinned by absorption at its free surface. In others, however, the bone is found inflamed at various points of its connection with the cartilage; and at these points the cartilage is loose, and may be peeled off, so that portions of thin attached and unattached cartilages are found in the same joint. When entirely denuded, or almost so, the surfaces of the bones may exhibit simply a state of increased vascularity, which precedes the effusion of plastic lymph for the purposes of reparation by ankylosis, or may be observed to be in a condition of ulceration. This ulceration may exist as a simple abrasion, or be of consi-

derable depth; but there is generally an uniformity in this respect over the whole surface. With this state of ulceration there is also a softening of the osseous structure, and frequently disintegration; the contents of the joint consisting of broken-up cartilage and osseous and other debris together, or osseous matter, with ichorous or sanious discharge. When the disease originates in the bone, as in by far the greater number of cases, in Mr. Gay's opinion, it does, the separation of the cartilage is effected by another process, which he terms "shedding," and the cartilage is then reduced to the condition of a foreign body within the joint. Shreds of cartilage thus situated in a joint may be observed after months, and even years of disease; and as, on the other hand, its separation from the articular extremity of the bones may be accomplished in an almost incredibly short period of time, it is fair to infer that the time thus passed must have been occupied in the process of its extrusion from the joint, and that this is accomplished, neither by ulceration nor absorption, but disintegration by, and solution in, the discharges of the joint. But the bone itself being diseased, adds its exfoliated or disintegrated particles to the cartilaginous debris, which, with its own discharges, constitute generally the contents of a joint in which the disease commenced in its bony elements. The result of these discharges is to set up inflammation in the sound textures contiguous to the joint, and general systemic irritation. Sinuses form around the joint; the disease extends itself; the ligaments become ulcerated; the spongy tissue of the bones infiltrated with pus, and broken down; osteophytes form around the heads of the bones; abscesses extend themselves into the surrounding soft parts, separating the different structures, and setting up unhealthy and destructive action amongst them; and, in short, a climax is arrived at in which the local mischief reacts upon the constitution, and life is only to be preserved at the sacrifice of the joint or of the limb. Mr. Gay inferred from these remarks, of which only an imperfect abstract has been given,—

1. That there appears to be no reason why diseases affecting the constituents of a joint should be slower in their course of reparation than diseases of any other part or structure.
2. That the removal of cartilage from its osseous connexion in a joint is occasionally effected by absorption, but most frequently by a process of "shedding," or exfoliation.
3. That cartilages thus shed become, by their being pent up in a joint, sources of local and constitutional irritation, and thus promote disease in the osseous and other

structures appertaining to a joint, supposing that such affections do not exist primarily; and in case they do, these cartilages, by the same influence, maintain and extend these diseases also.

4. That the natural outlets for these discharges, the sinuses, are inadequate for that purpose.

5. That therefore the exfoliated contents of a diseased joint have to be minutely broken up by, or dissolved in, the discharges of the joint, in order to their removal; processes which are necessarily of a very protracted order, and which account for the tardiness in general characteristic of joint diseases.

6. That the exfoliated contents of a joint, after its cartilages have been removed, and even after extensive disease has been set up in the bones and other textures, have only to be completely removed, and processes of reparation will, in the majority of instances, immediately commence.

Mr. Gay then alluded to the usual modes of treatment, and remarked, that the operation of re-section of a joint is not only a useless but an unphilosophical mode of treatment for diseased joints. In the first place, primary disease is generally limited to one of the articular extremities of the joint: it is therefore a useless mutilation to remove more than that disease, supposing the operation were for a moment admissible. But, moreover, dissections show that disease originating in bone, when arrived at that stage at which the operation of re-section is generally employed, has extended itself far beneath the surface, and frequently along the shaft for a third of its whole length, so that re-section cannot accomplish its purpose, which must be manifestly the removal of all disease. The plan Mr. Gay recommends, then, is free and deep incisions made along each side of a joint, so as to lay open its cavity freely, and to allow of no discharges being by any possibility retained within its cavity. They should be made of such a length, and so treated, that they do not heal into the form of sinuses. They should be made, if possible, one on either side of the joint, and in the direction of the long axis of the limb. They should extend into the abscesses in the soft parts so as to lay them open. If sinuses exist, the incisions should be carried through them, if this can be done without departing from a slight curve. If either of the bones be carious or necrosed, the incisions should be carried deeply into such bones, so as to allow the dead particles of bone to escape. Ligaments which stand in the way of a free discharge from the joint should be cut through. Of course important vessels should be avoided. The wounds should be kept open by pledgets

of lint, and free suppuration encouraged. The constitutional powers have in each case rallied immediately after the operation; and as the discharges from the joint have altered in character and become healthy, which they in general do in the course of two or three weeks, these become invigorated, and improve with the improving joint. Mr. Gay then narrated some cases in corroboration of his views:—Peter D—, aged thirty-eight, admitted into the Royal Free Hospital in 1842 for diseased elbow-joint of three years' standing, with ulceration of the cartilages and sinuses. The joint was opened on either side, and healed in eleven weeks. The next was a case of disease in the articulation between the first and second phalanges of the thumb of eighteen months' standing. Cured in six weeks. The third case was that of a man with "long-standing" disease of the tarsal articulation. One sinus led to the interior of the joint. Incisions were made on each side of the foot, and complete ankylosis followed. The fourth case was that of a little boy with strumous constitution, with disease of the knee-joint consequent upon suppuration of the bursa behind that joint. The little fellow was reduced by fever to a very low ebb, so that bed-sores formed on parts of his body. The joint was opened; ankylosis took place at the end of four months, and the knee bent on the thigh. The fifth case was that of a German, with disease of the wrist-joint, which had resisted treatment. One sinus led into it. One incision was made at the back of the joint, and ankylosis followed, but was not observed to be perfect for six months. The sixth case was that of a young Irishwoman, with disease of the tarsal articulation, following upon traumatic erysipelas of the leg and foot. She was reduced to an exceedingly low condition, and from cough with bloody sputa, night sweats, (according to Dr. Heale,) the physical symptoms of the chest, and extreme emaciation, she was supposed to be phthisical, and so diseased, that amputation, which was supposed to be the only remedy for the disease, as far as the joint was concerned, was forbidden by the authority of Dr. Heale. Mr. Gay made an incision on either side of the foot in this case, and the change both in the joint and constitution was remarkable. Her health rallied from that moment, and the joint assumed a more healthy aspect. In a fortnight the joint was fixed by the exudation of lymph between the bony surfaces, and in five weeks perfect ankylosis had taken place, and the wounds had healed. She soon after left the hospital, and was, a week or two since, to Mr. Gay's knowledge, in perfect health. The seventh case was that of Highley, a

report of which has been published. The eighth case was that of a little boy with disease of the articulation of the first and second phalanges of the thumb. In this case the cure was not accomplished. The incisions resolved themselves into sinuses, and after several months the necrosed phalanx came away.

Ulceration of the Mucous Membrane of the Rectum.

MR. COULSON had lately been called to a case of ulceration of the linings of the rectum, which he considered offered some points of interest to the members of the Society. The patient, a male, æt. 34, passed a semi-solid feculent motion once in every twenty-four hours; but, during the same period, had five or six discharges of mucus, pus, and blood. On examination with the speculum, the mucous membrane was seen in a state of ulceration for a space of two inches up the intestine. A great variety of remedies had been tried, without beneficially influencing the progress of the disease; at last, a decoction of tormentilla was resorted to, with perfect success, the abnormal condition being removed in the course of a month. The decoction was made by boiling three ounces of tormentilla root in one pint and a half of water, and was used as an injection; a quarter of a pint being thrown up twice a day, and retained for fifteen minutes.

Mr. Coulson had met with another case, similar in respect of its nature, but not in its termination; for after twelve months' suffering the patient died. On a post-mortem examination of the rectum (a preparation of which was handed round), the mucous membrane was found destroyed, and the ulceration was found to have spread between the muscular fibres of the bowel; inflammation had been set up in the neighbouring cellular tissue, and abscesses had formed, which communicated ultimately with the rectum.

Mr. Coulson considered the disease to be not in any way allied to the small ulcer of the rectum, so frequently to be discovered. The treatment suited to one could not be applied to the other. He also advised the use of the speculum in all cases of ulceration of the rectum, and he exhibited an improved apparatus which had been devised by Mr. Fergusson, of Giltspur Street, by means of which, without changing the instrument, ulcers might be examined on any part of the wall of the rectum. The improvement essentially consisted in the adaptation of a moveable in the place of a fixed handle.

MR. RICHARDSON read a paper on the Pathology of Fibrine, which will be published in our journal.

PATHOLOGICAL SOCIETY OF LONDON.

DR. P. M. LATHAM, PRESIDENT, IN THE CHAIR.

November 4, 1851.

DR. RISDON BENNETT presented also a specimen of

Fibrous Degeneration of, and Deposits in, the Substance of the Heart.

A married woman, aged 50, was admitted into St. Thomas's Hospital, on the 14th October, under the care of Dr. Bennett. From the age of six months she has been the subject of imperfect hemiplegia of the left side; for some time she had occasionally suffered from dyspnoea, and for two months had had anasarca of the lower extremities with increasing general debility. She did not confess to any palpitation or other local symptom having direct reference to the heart. She had some cough, but no evidence of pulmonary congestion; the liver was not enlarged, nor the urine albuminous; the countenance was tolerably healthy, the skin soft, and the tongue moist; pulse very small and feeble. The systole of the heart was attended by a prolonged bruit, loudest over the mitral valves, followed by a distinct natural second sound, to which succeeded a remarkably prolonged interval of rest: the rhythm was frequently irregular. On the 17th she became suddenly more feeble, and this state increased, notwithstanding the use of stimuli, till the day of her death.

Post-mortem examination.—The pericardium was found extensively and firmly adherent. The heart was enlarged, both the right and left ventricles being dilated, and their walls hypertrophied. All the valves were healthy, excepting, perhaps, the aortic, which were somewhat thickened, but not to such an extent as to interfere with their functions. A vertical section through the left ventricle and aorta showed the walls of the ventricle to be increased in thickness and encroached on, and in parts replaced by some adventitious product. Towards the base, the muscular tissue gradually disappeared, at the expense of its outer part; so that, at the distance of three-quarters of an inch from the aortic valves, and from that point upwards, it was entirely wanting, and was replaced by a firm, dense, translucent fibrous tissue, which extended some little way upwards on to the aorta, and downward on the exterior of the muscle, gradually losing itself in the substance of the pericardium; opposite the v was an inch in thickness: about tw

below the valves was an irregular, opaque, yellowish, somewhat firm, circumscribed patch, which extended some little way into the substance of the muscle. On cutting further into the walls of the ventricle, several of these masses were found about as large as peas, or a little larger, and having a yellowish buff-colour, tough and firm, and very much the appearance of the fibrinous deposit found in the spleen, &c. Some of these masses were circumscribed; in other spots the substance seemed diffused through the tissue of the heart: one mass projected into the right ventricle from the septum. The lining membrane over the septum ventriculorum was considerably thickened and roughened, and around the bases of the left ventricle were several large, irregular, unorganised coagula; one larger than the rest occupied the cavity of a commencing aneurism about an inch in diameter, situated on the left side of the ventricle close to its base. The aneurism did not project externally. The walls of the right ventricle were also thickened; and here the muscular tissue was absent for a space of an inch and a quarter below the pulmonary valves, and was replaced by dense fibrous tissue. The lining membrane of the ductus arteriosus was much thickened, and a thick cicatrix-like band extended around it immediately below the pulmonary valves, constricting this part to such a degree that the orifice was less than that of the pulmonary artery. The thickening of the lining membrane extended beyond the ductus arteriosus, especially on the septum and anterior wall of the ventricle. The upper part corresponded to a fibrous degeneration of the muscular tissue. The thickened membrane over the septum presented numerous opaque yellow patches, which had the appearance of atheroma. Some of these were of considerable size and corresponded to elevations, on section of which it was seen that the muscular tissue beneath was converted into a yellowish material much resembling that found in the walls of the left ventricle. The masses were, however, larger, softer, less distinctly circumscribed; and one of them was softened in the interior into a puriform fluid (in which, however, microscopically, no pus-cells were seen). The lungs were more congested than natural, but not otherwise unhealthy. Nothing worthy of notice was found in the other organ.

Dr. QUAIN, to whom this specimen was referred for report on the microscopic characters of this deposit, said that the yellow tough substance taken from different portions of the ventricle, including the walls of the aneurismal depression, which seemed to be formed by a softening and yielding of this substance, was found

to consist of cells, of fatty particles, and of degenerated muscular fibres. These cells were generally spherical, in size from 1-4000th to 1-2000th of an inch in diameter, having very thin walls, easily broken down, and containing a few granules. There were also some, but not many, larger cells, with equally thin walls; oval or elongated in form, and showing nuclei in their interior. The structure and arrangement of the cells are rendered distinct by the action of acetic acid. The cells are generally so placed in lines as to give the appearance of fibres, which have then a kind of concentric disposition. The fibrous dense tissue in the right ventricle presents a structure very similar to that just described. There is nothing sufficiently decided in the structure to justify a decided opinion as to its nature. The specimen has been described by several accurate observers, and very different opinions have been expressed, though none very positively, as to its nature. Thus, it has been thought to have some of the characters of malignant disease, of tubercle, of concrete pus, and of fibrin or fibrinous deposit, such as is frequently observed in the spleen. This latter view of the nature of the deposit (that of Dr. Bennett and Mr. Simon) seems to be the most correct; and, if so, the specimen resembles one figured by Dr. Carswell, in the fourth fasciculus of his *Morbid Anatomy* (Plate 3), and which is there described as illustrative of the conversion of the fibrin of the blood into fibrous tissue.

The PRESIDENT paid a high compliment to Dr. Peacock and to Dr. Quain with reference to the valuable investigations they had made on the subjects of interest referred to them respectively, and added that he considered the Society was much indebted to gentlemen who devoted time and talent to the further elucidation of such matters.

Dr. JAMES BIRD presented a specimen of

Abscess of the Middle and Posterior Lobes of the Left Hemisphere of the Brain, associated with Rheumatic Symptoms.

A FEMALE, aged 17, of a lymphatic temperament and anæmic constitution, who had suffered from dysmenorrhœa, complained of headache on the 11th of October, 1851, accompanied by stiff neck, tenderness of the cervical muscles, and undefined febrile symptoms, supposed to be those of incipient typhus. The symptoms continued to increase, notwithstanding the operation of a purgative, followed up by some diaphoretic and diuretic draughts. On the 17th she had a cold fit, followed by copious perspiration. On the 18th Dr. Bird saw her, with Mr. Fennell, and found

her lying on the right side, complaining of extreme tenderness of the epigastrium, particularly where pressure was made upwards against the diaphragm; also tenderness of the præcordial interspaces, much neuralgic tenderness and stiffness of the muscle of the left arm and leg, and of similar tenderness of the right side, but in a minor degree. There was epigastric pulsation, also vomiting and gastric irritability; short, quick respiration, and wandering delirium. The patient retained consciousness, and gave rational answers when roused. She had extreme tenderness at the nape of the neck, extending over the whole of the epicranial region, with much headache, and some degree of sore throat. She lay with her eyes quite open, and in a semi-comatose state, the pupils unnaturally dilated, and her countenance pale and languid; pulse 100, free but soft; temperature of the skin not greatly increased. Having taken some mercury and chalk, with James's powder and opium, followed next morning by a purgative draught containing vinum colchici, she had one copious dark stool; and had a turpentine and pyroligneous acid liniment applied to the epigastrium. She felt somewhat easier on the 19th. She was then cupped on the nape of the neck to six ounces, with marked relief. On examining the heart, there was heard a harsh, irregular, endocardial, systolic murmur on the right side, which was audible also at the epigastrium. On the 20th, there was less muscular tenderness of both sides; and on this day a large patch of erythema papulatum situated on the right hip and thigh, was first pointed out to Dr. Bird. The delirium continued to increase, followed by deep coma on the 22nd; and death took place on the morning of the 23rd.

Examination after Death.—The examination was made by Mr. Bullock, of St. Mary's Hospital. The body was rather thin and pallid.

Head.—The pia mater presented, on the upper part, much dark venous congestion, unaccompanied by any serous effusion under the arachnoid; but at the base of the left hemisphere it presented a state of bright red vascularity, as seen in active inflammation of this membrane. There was no abnormal redness of the substance of the cerebrum, as far down as the corpus callosum; but, on cutting into the left ventricle, a gush of yellow purulent matter, mixed with clear flakes of lymph, to the amount of about 3 oz., took place. There was an effusion of about an ounce of clear serum in the right ventricle. On removing the left hemisphere of the cerebrum, the abscess was laid open from the base. It

was found occupying the ventricle, its cornu, and both the middle and posterior lobes of the hemisphere. It was partly lined by a soft, flocculent, vascular membrane, presenting somewhat of the villous vascular appearance of a mucous surface, and composed seemingly of the ventricular lining membrane. The cerebral substance in the neighbourhood was softened, but was not abnormally vascular. The pia mater covering the inferior surface of the middle and posterior lobes was of a bright red vascularity.

Chest.—The lungs were healthy. The pericardium presented no signs of inflammation. In the right auricle and ventricle there were several firm carnified coagula; those in the ventricle adhering firmly to the cordæ tendineæ. There was no valvular disease on either side.

Abdomen.—The mucous coat of the stomach on its great curvature, from the cardiac to the pyloric orifice, was uniformly red and vascular. The liver was spread over a somewhat larger space than usual. The peritonæum and intestines presented appearances of venous congestion; as did the right kidney, which was examined, and found to be natural in structure. The uterus was small, but normal.

Morgagni, from Valsalva, describes a somewhat similar case of a woman, in whom the left ventricle contained a large quantity of pus, without any discoverable lesion of the cerebral substance. The menstrual discharges had greatly decreased, and a tumour arose on the left leg, for which the limb was amputated. The healing of the stump proved tedious, and, after the completion of the cicatrization, the characters which the case assumed were fever, apoplectic symptoms, delirium, convulsions, and palsy of the right side. In the present instance, the dysmenorrhœa, eruption of the erythema papulatum, and fibrinous coagula in the heart of some standing, are all so many proofs warranting the inference that the patient was of a rheumatic diathesis, and owed many of the symptoms of her last illness to a rheumatic condition of the blood; which was not, Dr. Bird regretted to say, subjected to a chemical examination. The connection between the chronic cardiac disease, which was of an obstructive kind, and the structural change in the cerebrum, must not be overlooked; for, according to the statement of the patient's mother, she had been ailing for some short time previous to the illness which terminated her existence. In how far the neuralgic rheumatism was the result of diseased irritation propagated from the central nervous organ, is a question of interest which Dr. Bird did not presume to determine.

Dr. BENCE JONES presented a specimen of
Serous Cysts in the Kidney; with some Observations on the Fluid Contents.

John Bussy, aged 35, was admitted into St. George's Hospital on the 29th of October, 1851. No satisfactory history could be obtained from him. It was said that he had been ill for a month, and that he was accustomed to drink hard. On admission, the fœtor of the breath was intolerable. The pulse was 130, exceedingly feeble; the tongue coated, the expectoration scanty. There was no œdema of the legs; the urine was passed involuntarily in bed. There was much delirium, and he was often trying to get out of his bed. There was extensive dulness at the back of the right lung, with very loud bronchial breathing, and coarse moist sounds, and absence of all healthy respiratory murmur. The pulse increased in frequency, the breath became more loaded, and he died October 31st.

Post-mortem, by Dr. Ogler, fourteen hours after death.—The body was emaciated, but well-formed. Height 5 feet 6 inches. There were extensive and very firm adhesions in the left pleural cavity; slighter adhesions towards the apex of the right cavity. Both lungs had a very dark bluish black surface, from an immense quantity of dark deposit, in small shot-like masses, beneath the investing pleura, which was roughened by prominent tubercular deposit, around which the dark matter was generally deposited. On section, both lungs contained large quantities of scrofulous matter. The tubercles, which varied much in size, were generally surrounded by the black deposit. This was especially the case in the right lung, where, in the posterior parts, vomicæ had formed, with definite fibrous areolar patches, containing matter for the most part of a very dark brownish colour, and very fluid, and of a most offensive gangrenous smell. Some of the tubercular deposits, instead of softening, had become consolidated, and presented pasty-like deposits; but these were rare. In its posterior and central parts, the lung was perfectly hepatised around the tubercles and vomicæ. The upper part and margins of both lungs were free from consolidation, but full of frothy fluid. The bronchial tubes throughout were highly congested. The heart was healthy, and weighed 10½ oz. The abdominal cavity contained a slight quantity of yellow fluid. The liver was soft, pale, and very fatty, weighing 3 lb. 5 oz. The kidneys weighed together 11 oz. 7 drs.; the right kidney was rather larger than the left. Both were perfectly smooth on the surface.

The capsule being easily removed, a number of small cysts, of various sizes, were seen: they varied from a pin's head to a walnut. On section, they were seen extending into and destroying the cortical structure. Some contained a gummy, soft, solid matter, of a yellowish colour; others had perfectly liquid contents. One cyst, the walls of which were fibrous and white, was punctured, and from it about a drachm of clear, offensive-smelling liquid was obtained. Examined by the microscope, scarcely a single blood-globule could be found. No epithelium or crystals of any kind could be seen. The liquid was neutral to test-paper. The specific gravity was about 1005. It contained no trace of uric acid. No earthy phosphates. Dr. Bence Jones could not satisfy himself that any urea was present. There was some salt of ammonia present, and a very considerable quantity of albumen. Under the microscope, the kidneys appeared healthy. The spleen was soft, weighing 3½ oz. The other viscera were healthy.

Dr. C. J. B. WILLIAMS desired to know whether the contents of the cysts had been analysed chemically, to discover the presence of urea, as in some instances he had himself detected a certain proportion thereof, although the great amount of the fluid was usually serum, and not urine. His inference was, that their contents were urine mingled with serum, and they consisted of obliterated uriniferous ducts.

Dr. BENCE JONES observed that, as the fluid was neutral to test-paper, it might contain minute traces of urea, but none of uric acid could be discovered. It was very albuminous, and its specific gravity 1005.

Dr. C. J. B. WILLIAMS then referred to the coincidence of the gangrenous condition of the lungs with the inefficient state of the kidneys. The latter disease, he thought, might perhaps have favoured the occurrence of the pulmonary gangrene by the non-purification of the blood.

Dr. HEALE remarked that any great disturbance of the system would cause an equivalent disturbance of the lungs, and their being in a state of gangrene might be explained.

Dr. CRISP believed that the occurrence of these two complaints in one person was a rare coincidence, as otherwise pulmonary gangrene would be met with much more frequently than it is.

Dr. BRISTOWE presented a specimen of
Deposit of Tubercle in the Peritoneum, and in the Uterus and Fallopian Tubes.

The two preparations (the one a portion of the small intestines, the other the uterus and appendages) were removed from the body of an unmarried female, twenty years

of age, of ordinary stature, and not emaciated, who died three weeks ago, in St. Thomas's Hospital, without the possibility of any satisfactory history being obtained, or attention being specially directed to the abdominal symptoms, which were slight. He was not aware if there had been any discharge from the uterus. On opening the cavity of the abdomen, strong adhesions were found in almost every part, and a small amount of slightly (if at all) turbid serum. The great omentum was strongly adherent to the abdominal parietes in front; the convex surface of the liver was so closely and firmly united to the diaphragm, that they could not be separated, and the intestines were everywhere attached to one another by strong bands and filaments of cellular tissue. Besides this, the peritoneal surface, together with the adhesions, was thickly studded with nodules of tubercular matter, varying in size from that of a filbert to scarcely visible points. The largest of all were very irregular and nodulated. Those of intermediate size (between that of a pin's head and that of a pea) were more or less rounded, and either sessile or pedunculated, or developed apparently in the adhesions themselves. Most of them presented patches of black discoloration, and this was so far of use that it enabled one to recognise the deposit in its earliest stage. The mesentery, like the other parts of the peritoneum, was studded with tubercles, but the mesenteric glands, as far as they were examined, appeared healthy. The stomach and great part of the intestines were healthy; the solitary glands of the large intestine were unnaturally distinct, and their orifices remarkably large and evident. In the sigmoid flexure was an ulcer, about an inch in diameter, with a sinuous, well-defined margin, and small patches of mucous membrane still adherent. The liver was somewhat enlarged, pale, soft, coarse in texture, and fatty. The spleen was of natural size, remarkably firm, of a dark colour, and presented on section a slight degree of translucency. The kidneys were pale, but healthy. The uterus and its appendages were the seat of extensive tubercular deposit. The Fallopian tubes were shorter than natural, about one-third of an inch in diameter, smooth on the surface, apparently distended, and conveying to the finger a sense almost of fluctuation. The right one was remarkably twisted, the fimbriated extremity being turned back upon the uterus, to the posterior part of which it was adherent. The left followed nearly its usual course, but both were fixed by adhesions to the surrounding parts. On squeezing them, well-marked tubercle exuded from their ex-

tremities, and on section they were seen to be completely filled by yellow cheesy tubercle. The ovaries were closely drawn to the sides of the uterus, but were themselves healthy. The uterus was somewhat increased in size, and twisted out of its natural direction by the adhesions which itself and the Fallopian tubes had contracted. On section its mucous membrane was seen to be the seat of tubercular deposit and ulceration. That of the cervix was healthy. Isolated masses of tubercle were likewise seen in the muscular tissue of the uterus itself. The peritoneum covering the uterus was similarly affected to the other parts of that membrane. The only mark of disease in any other organ was the presence of two or three small clusters of miliary tubercle in the apex of the right lung.

Mr. POLLOCK, in examining the post-mortem examination books at St. Guy's, had met with six cases of a similar disease affecting the mucous membrane of the uterus, in three of which the ovaries were the seat of scrofulous disease.

Dr. BRINTON, after remarking that the fibrinous deposit in some cases of peritonitis resembled tubercular matter, so far as to cause a doubt to exist, especially when the more important organs, which are usually implicated, escape altogether, enquired if the deposit had been examined under the microscope.

Dr. BRISTOWE replied that it had not been done at a time when the results were likely to be satisfactory.

Dr. C. J. B. WILLIAMS considered that tubercular peritonitis, and tubercular disease of the mesenteric glands, so far from being co-existent diseases, might be regarded as antagonistic, as they rarely, if ever, appeared simultaneously. Chomel has denied that what is called tubercular peritonitis is really a tubercular disease; but the fact is, that although the yellow tubercle does not occur, the miliary form is met with.

Dr. BRISTOWE had lately examined the body of a female, in which he had found consentaneous tubercular disease of the ovaries and lungs.

Dr. WEST enquired of Dr. Bristowe whether the whole uterus were diseased.

Dr. BRISTOWE replied that the uterus was not affected, but the ovaries and the Fallopian tubes.

The parts exhibited by Dr. Bristowe were then referred to Dr. West, and the kidney presented by Dr. Bence Jones referred to Dr. Bristowe, to report on at a future meeting.

Mr. FERGUSON presented

A Diseased Larynx and Trachea seven days after the Operation of Tracheotomy.

The mucous membrane of the larynx is in a state of ulceration; the vocal chords and the laryngeal pouches having disappeared, and the whole inner surface of the larynx is one large ulcer. The disease was of four months' duration. Latterly the patient could speak only in a whisper, and the difficulty of breathing was occasionally so great as to threaten immediate death. Tracheotomy gave great relief, but the patient died of erysipelatous inflammation of the subcutaneous cellular tissue. There was no disease of the lungs.

The PRESIDENT inquired of Mr. Fergusson whether the disease were acute or chronic?

Mr. FERGUSSON replied that it was rather acute. If the patient had not been repeatedly threatened with suffocation, the operation would not have been done. He thought, as such danger existed, it was advisable to give the man a chance of relief.

Mr. TOYNBEE presented a specimen of
Congenital Malformation of the External Ear and Meatus on each side.

M. A. J., aged 22, was sent to Mr. Toynbee by Dr. Theophilus Thompson, in order that he might examine her ears, and give an opinion respecting the propriety of an operation. Upon examination, the right ear was observed to consist of a fold of integument about an inch and a half long, the upper portion being somewhat curved: about the middle of this fold, anteriorly, was an orifice which admitted the rounded extremity of an ordinary-sized probe; it terminated in a *cul-de-sac* at the depth of a line and a half. On placing the finger over the situation of the external meatus, a shallow depression was felt. The left ear, like the right, consisted also of a fold of integument which contained a small portion of cartilage: it was much smaller, but it had more of the form of the natural ear. There was no appearance of external meatus, nor was any depression felt in its ordinary situation. The mastoid process on each side was fully developed: the zygomatic arch appeared to be absent. The distance between the mastoid process and the molar prominence was remarkably short, and the patient had a peculiar square-shaped face. Upon experimenting respecting the hearing power, Mr. Toynbee found that, at the distance of a foot from the head, the patient heard ordinary conversation perfectly well; beyond that distance she could not catch the voice. It did not appear that she heard better in the vicinity of the ears; on the contrary, she stated that, when the voice was directed to the back of the head, she heard better than when it was at the same distance opposite to the ears. Mr. Toynbee observed, that it would be remembered by

the members of the Society that he laid before them, in the session of 1847, the account of a dissection of a child in whom existed a deformity similar to the present. In that case, and in the two others which have been dissected,—one by Dr. Jager, the other in the Anatomical Museum of the University of Edinburgh,—a similar condition of parts was manifest,—*i. e.* the tympanic element of the temporal bone was absent, and the only vestige of the external meatus was a narrow fissure, at the bottom of which was a dense membrane. There was no appearance of *membrana tympani*. From what has been stated, it would not be anticipated that much relief is to be gained by the performance of an operation: indeed, when it is borne in mind that dissections of similar cases have shown that the tympanic cavity is covered in externally by a firm layer of bone, and that the only rudiment of a meatus is a narrow fissure filled by a dense fibrous membrane, it is not to be supposed that the removal of the integuments would materially improve the power of hearing. In the present case a crucial incision had been made over the site of the external meatus, and the surface of the bone exposed. The improvement to the hearing was, however, very slight: it did not materially facilitate her communication with those around her, and consequently the margins of the incision were allowed to unite. The only cases of this malformation in which it appears desirable to perform an operation are those where the external ear hangs forward, and a considerable amount of deformity is produced.

Mr. TOYNBEE also presented a
Specimen of Calcareous Matter in the Cavity of the Vestibule.

This was taken from an old man who had been very hard of hearing for a considerable time. The stapes was ankylosed to the fenestra ovalis. The masses of crystals in the vestibule were very much larger than natural, and among them were found portions of calcareous matter having an irregular shape and a cellular surface, on which were observed some of the crystals.

Mr. MITCHELL HENRY presented a specimen of

Abscess of the Liver, which opened into the Lung, consecutive to Dysentery.

William Lift, aged 45, a carpenter, and usually in the enjoyment of good health, was admitted into the Middlesex Hospital on October 28, 1851, under the care of Dr. Seth Thompson. Eight weeks previously he had been seized with violent purging of blood and mucus, which continued for fourteen days, at the expiration of which period the diarrhoea decreased somewhat,

but was succeeded by a constant gnawing pain in the right hypochondrium. A week previous to admission, he had been following his employment, but, finding his symptoms grow worse, sought refuge in the hospital. On the third day after admission, he passed some blood and slime from the intestines, and, having been taken with a violent fit of coughing, brought up about two ounces of discoloured, but not fetid, pus. These symptoms continued, with little abatement, until his death, which happened three days afterwards.

Post-mortem.—The liver was found excavated by an abscess, the size of a large orange, filled with natural-looking pus. This abscess having contracted an adhesion to the diaphragm and base of the right lung, had made its way into one of the smaller bronchial tubes, and thus partially discharged its contents during life. There was another smaller collection of matter in the liver, distinct from the larger one, about the size of a marble, but in other respects the organ was healthy. The right lung was the seat of lobular pneumonia in various parts, but there was no collection of pus anywhere to be found. On the left side there was some pleurisy, and the lung was in much the same state as its fellow, but at the apex of its upper lobe were scattered various tubercles; and there was also a small cavity, containing cretaceous tubercular matter. The other internal organs, and the small intestines, presented no traces whatever of disease. The large intestine, from one end to the other, was in a state of acute dysenteric inflammation, the disease being most severe at the opposite ends of the canal, the cæcum, and the rectum. These portions of the bowel were sphacelated, the mucous membrane being entirely disorganised, and of a dark purple or bluish colour. In many parts there hung down long sloughy masses, such as are found in phlegmonous erysipelas of a limb. The intermediate portions of the bowel exhibited the effects of the disease in a slighter degree only; small portions of the mucous membrane being dead and in process of separation, and the glands being occupied by ulcers of variable size and depth. Throughout the whole track of the bowel there were masses of disorganised epithelium and lymph lying on the inflamed surface. The case exhibits a much more severe form of dysentery than is usual in temperate climates, and is hardly to be distinguished from the more acute disease of the tropics. There is a clear history of the bowel affection, antecedent to the disease in the liver, and it therefore affords a confirmation of the correctness of Dr. Budd's views of the formation of such secondary abscesses. It is

an interesting circumstance, in connection with the disease, that at the Millbank Penitentiary, where the English form of dysentery is so common, Dr. Baly has not met with a single example of suppuration in the liver, though he has found the intestine in all stages of the disease, and the records of the prison extend back to the year 1824.

SURGICAL SOCIETY OF PARIS.

Nov. 12, 1851.

Catheterism and Puncture of the Bladder.

M. MONOD, with reference to a patient that had died under his care, with a cancerous affection of the bladder and prostate, replied to M. Maisonneuve, who had given it as his opinion that it is always practicable to reach the bladder when the canal is altered in form, if there be no stricture, or false passage. M. Maisonneuve had stated that this might always be effected by curved flexible bougies having a slight enlargement at the end. M. Monod mentioned that he had employed these instruments with much perseverance, and aided by M. Leroy d'Etiolles, without having succeeded. The canal was so much deformed in this case, that the neck of the bladder was found lodged behind the pubis. It must, therefore, he contended, be admitted that catheterism might be impossible where neither stricture of the urethra nor false passage existed.

It was evident that puncture of the bladder was the only resource left; the patient had not died from the effects of the operation, but from the progress of the disease, more than a month afterwards.

M. MAISONNEUVE would not deny that invincible obstacles might be encountered, but he had never met with such himself.

M. LENOIR was of opinion that these obstacles are not so very uncommon; e.g. disease of the prostate.

THE MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH, AND HOMŒOPATHY.

At a meeting of the Medico-Chirurgical Society, held on Wednesday, the 19th of November, Professor Syme moved, and Dr. J. Y. Simpson seconded, the following resolution,—“That the public profession of Homœopathy shall be held to disqualify for being admitted or remaining a Member of the Medico-Chirurgical Society of Edinburgh.” Sixty-four members were present, and the resolution was carried unanimously.

Correspondence.

CASES SHOWING THE ABUSE OF THE SPECULUM.

SIR,—If you should judge the following cases, in reference to the abuse of the *Speculum Uteri*, to be sufficiently illustrative of your remarks in a recent leading article, I shall feel obliged by their insertion in the pages of the MEDICAL GAZETTE.

CASE I.—A patient under my care was suffering from acute ovaritis. This was followed by the formation of an ovarian cyst, the origin and growth of which, so far as it was possible, I had traced with much care and a melancholy interest, inasmuch as it threatened to blight the hopes of an heir to a long line of ancestors. It is not necessary to detail all the symptoms of this case; it may suffice to state that the most prominent symptom, and, consequently, that which the patient took most to heart, was the recurrence of abortion upon every occurrence of conception: the two events were frequently happening. In relation to this point, I had to the husband laid the greatest stress upon “total abstinence.” However, and probably no very great wonder, my cautions under this head met with no heed. I pointed out most emphatically the risks attending parturition, if pregnancy progressed; and, on the other hand, the inevitable constitutional damage which must result from such repeated abortions.

This advice was seconded, in very peremptory terms, by the opinion of an eminent physician-accoucheur; but all to no purpose. The patient preferred the causes, to the prevention of the danger, and vainly flattered herself that she could find safety in medical aid, which she has sought, I may observe, at a variety of hands, not excluding at last homœopathy. Among other modes of treatment, the speculum was used for *ulceration of the cervix uteri*! (which, I assure you, did not exist, as I have ascertained by examination), and of which there was not one general or local sign. However, that was not very important to the “*speculigerent*” physician-accoucheur into whose charge she fell, and whose sole aim, as it appears to me, was to make this lady believe that he held in his hand, and introduced into her vagina, the means of fulfilling her desire for offspring, and of curing her ovarian tumour. Being, however, a tolerably shrewd woman, and having been before her last marriage the widow of a surgeon, she before very long saw through

the practice, and discontinued her attendance upon the “speculator.”

I do by no means envy that person the comments made by this lady upon the manner in which the subject was discussed by him, or the manner in which it was practised, and her sister, a young single woman, invited to inspect the ulcerated (?) os uteri!

Your observations, in the article above alluded to, have forestalled the remarks I would have added upon this feature of the case.

I shall therefore merely add that the patient was enjoined, in the event of medical aid being required by her at any other time, *not to send for her ordinary medical attendant, who, it was said, did not understand the nature of her case*, but to apply for help to *Dr. Speculans*, who was to secure a safe gestation and an easy delivery, forsooth! to a woman with an ovarian cyst in her pelvis as large as my head!

Furthermore, I must not omit to mention, as another illustration of this physician's integrity and pathological knowledge, that the patient was informed that *the existence of the ovarian cyst was attributable to my not having leeches her os uteri when she had the first attack of ovaritis*!

I cannot help inferring from these facts that “Speculator” was less anxious about my professional reputation than desirous to make an impression upon the patient's mind of his own supreme wisdom, with an eye to his own pecuniary gain.

CASE II.—A lady, about forty years of age, had married a widower with children, and, proving childless, was naturally most desirous for offspring. I had attended her for menorrhagia, lumbar pains, &c. She recovered under general treatment. She then persuaded herself that she was pregnant. This assumption I could not confirm. Suffering from various slight ailments and inconveniences of an indefinite character, too slight to deserve medical attendance, I left her with directions as the means of preserving her general health, and heard no more of her for several months. Being summoned to her one day in haste, I found her with a severe attack of common autumnal diarrhœa, which yielded readily to treatment. She then told me that, at the persuasion of a friend, she had placed herself under the care of a “speculator,” who had discovered what he impressed upon her I had altogether overlooked—viz., “*an ulcer on the womb*,” and forthwith he made use of some local application. In learning the history of the case, this “Doctor” thought it necessary to inquire of the patient “whether she was married to the man of

her choice," "whether she was happy in the married state," "whether she enjoyed marital intercourse!" &c. &c.

The statements here mentioned were not extorted from my patient by cross-examination on my part, but volunteered—indeed, were thrust upon me with something of loquacious reproach for the neglect which she had been taught to believe that she had received at my hands on former occasions.

I emphatically expressed my disbelief of the existence of disease of the uterus, and my disgust at the kind of inquiries that had been made; but offered, for her as well as my own satisfaction, to make an examination by the speculum. The result was, the opportunity of seeing as healthy an *os uteri* as it ever occurred to me to behold. I simply assured her of this fact, at the same time declining the medical care of her case unless she made a determination to abandon this notion—to forget, if possible, even the very existence of her uterus—and to give me her entire confidence as to the therapeutic means I should see fit to employ. To these conditions she professed her willingness to conform; and the consequence was, that this lady, who previously had considered herself unequal to exertion of any kind, and whom imaginary pains had kept for many weeks on the sofa, was within a fortnight actively engaged in her domestic duties, and able to take the out-door exercise that I had enjoined; and, I should add, has since continued in good health.

By what name can the line of conduct in these two cases be designated? What were the means by which, in both of these instances (for a time at least), I was robbed of my patient? What object could the actors have had in view when retaining my cases by depreciating my competency to treat them? What kind of therapeutics, or diagnosis, was the use of the speculum in these cases? What must be the impression made upon the public mind by such doings? What words will express the estimate of the moral character of these "speculators?"

I fear the answers to these half-dozen questions may be given in as many words:—Imposture; Misrepresentation; Self-aggrandisement; Obscene; Disgust; None—at least, that I am disposed to make use of on this occasion.

In the face of all these evil elements of detraction, the "ordinary" practitioner need be on the alert as to the hands in which he may place his own reputation and his patient's cases. Nevertheless (and the two cases I have related bear me out), he may rest assured that a diligent study of all the proper means of diagnosis, and

their conscientious use or disuse, will ultimately be found to be more justly appreciated than we may be disposed occasionally to imagine, while smarting under the temporary theft or injustice.

Before concluding, I wish to draw your attention to two features in the history of cases of supposed ulceration of the *os uteri*, that have not been especially pointed out. These are—first, the remarkably longer period that the disease occupies in the process of cure among the rich than among the poor; and, secondly, the fact that errors of diagnosis are very much more readily detected, by a certain class of "speculators," in patients of the upper and middle, than of the lower classes. These are, perhaps, among the former, merely the consequences of the possession of the means of finding a remedy for the supposed neglect or oversight. If the "ordinary" medical attendant be so blind that he cannot, or so obstinate that he will not, see an ulcer on every woman's *os uteri*, money will at all events readily command the clearer sight and higher reach of manual dexterity of an "extraordinary" attendant, who will not only discover the ulcer, but will introduce the speculum as often as the morbid and perverted feelings of the patient shall call for it.

In what has here been written I would not be understood to charge any individual medical man with such frequent breaches of professional morality; but I know that, in the hands of a class, the speculum *uteri* is too often unnecessarily used; and I cannot, by the utmost exertion of charity, seeing what I have seen, bring myself to believe that this *abuse* of the speculum is *always* perpetrated in ignorance. The two cases which I have submitted were such obvious instances thereof that I can refer them to no other than wilful and deliberate deception.

In relating these cases I have not mentioned names, because I have the fear of the law before my eyes; bearing in mind the dictum of Lord Mansfield, "*The greater the truth, the greater the libel*," and entertaining great respect for the sage conclusions of Sir John Falstaff, "The better part of valour is discretion, the which part I choose;" and also because the opposite course could only lead to endless statements and counter-statements.

These cases are not singular; I could relate several others perhaps less striking: they have only the merit of illustrating a great and crying evil of the present day, and of being faithfully drawn from life, without any exaggeration whatever.

By your obedient servant,

W. B. KESTEVEN,

Upper Holloway, Nov. 5, 1851.

SIX PAPERS ON THE CLASS OF MEDICAL LITERATURE MOST NEEDED IN THE PRESENT DAY. ADDRESSED TO MEDICAL STUDENTS. BY HORACE DOBELL, MEMBER OF THE ROYAL COLLEGE OF SURGEONS.

No. VI.

The philosophy of Bacon contrasted with that of the ancients—deference of object—additional reasons for expecting success from the application of philosophy to medical studies—Treatment of disease—the knowledge necessary before it is attempted—Means of discovering the effects of new medicines and operations—The attributes of a true experiment—its proper place in scientific researches—Enumeration of four of the conditions essential to improvement in Medicine and Surgery—The fifth essential condition considered—Answer to the question “How shall we improve our profession?”—The reasons why this improvement has not been already effected—why it cannot be until some preparation has been made—the nature of this preparation—a prelude to an inductive epoch—Especial attention directed to this part of the subject.

I HAVE now endeavoured to show that there are, at the present day, the conditions necessary for inductive reasoning in medicine and surgery,—that there are facts and ideas, and that the ideas are, to a great extent, appropriate to the facts. But I have reserved for this place an all-important portion of the subject; considerations which add the most powerful arguments in favour of those already adduced.

Among the causes of failure in the philosophy of the ancients, “a mistaken notion of the proper objects of philosophy” stands foremost. I have asserted that their goal was a “castle in the air,” and it was during the period when this mistaken object was aimed at, that medicine and surgery were made the study of philosophers. Since then, the noble work of Baconian philosophy has been building “the temple on the rock.” We cannot consider that philosophical reasoning has ever been employed to a large extent upon the science of medicine, when we compare the objects sought after in the philosophical period with those which now are held to be worthy of the emulation of our reason. “The chief peculiarity of Bacon’s philosophy,” says Mr. Macaulay, “seems to us to have been this; that it aimed at things altogether different from those which his predecessors had proposed to themselves. This was his own opinion. ‘Finis scientiarum (says he) a nemine adhuc

bene positus est’*. And again, ‘omnium gravissimus error in deviatione ab ultimo doctinarum fine consistit:’† ‘nec ipsa meta,’ says he, elsewhere ‘adhuc ulli, quod seiam mortalium posita est et defixa.’‡ The more carefully his works are examined, the more clearly we think it will appear that this is the real clue to his whole system, and that he used means different from those used by other philosophers because he wished to arrive at an end altogether different from theirs.”§ “What, then, was this end which Bacon proposed to himself,” continues Mr. Macaulay. “It was, to use his own emphatic expression, ‘fruit.’ It was the multiplying of human enjoyments, and the mitigating of human sufferings. It was ‘the relief of man’s estate.’|| It was ‘commodis humanis inservire.’¶ It was ‘efficaciter operari ad sublevanda vitæ humanæ incommoda.’** It was ‘dotare vitam humanam novis inventis et copiis.’†† It was ‘genus humanum novis operibus et potestatibus continuo dotare.’‡‡ This was the object of all his speculations in every department of science, in natural philosophy, in legislation, in politics, in morals.”§§ “Two words form the key of the Baconian doctrine,—utility and progress. The ancient philosophy disdained to be useful and was content to be stationary.”|||

Since the establishment of the Baconian doctrine no philosophical period has returned to the science of medicine. The materials for this event have been accumulating rapidly; but while other branches of science have been gathering in their rich harvests, medicine has been passing its seed-time, and its days of fruit are yet to come; the causes of failure, when philosophy was formerly applied to it, are all more or less removed. The mistaken object has given place to a correct one. The deficient facts are being supplied—the inappropriateness of idea no longer exists. I am justified, then, in expecting successful results from philosophy, although it failed to produce them in former days.

It has been demonstrated that the causes and processes of disease require inductive reasoning for their discovery. The next portion of deficient knowledge in medicine and surgery we found to consist of “treatment”—the means of arresting processes or removing causes; and I must now offer some

* Nov. organ. lib. 1 aph. 81.

† De argumentis, lib. 1.

‡ Cogitata et visa.

§ Macaulay, op. cit.

|| Advancement of Learning, bk. 1.

¶ De argumentis, lib. 7. cap. 1.

** De argumentis, lib. 2, cap. 2.

†† Novum organon, lib. 1, aph. 81.

‡‡ Cogitata et visa.

§§ Macaulay, op. cit.

||| Macaulay, op. cit.

observations on this point. Before setting about to remove causes we must learn what causes exist—before learning to treat a disease it is necessary to know what there is to treat. It is evident, therefore, that the part of the subject already disposed of is the most important to us at present:—believing it to be so, I have devoted much more time to discussing it than I can give to the part now under consideration. The treatment of diseases will consist of two parts—an attention to regimen, and the administration of drugs or performance of operations. The application of the former—*i. e.* the regulation of diet, of atmospheric influences, of exercise to organs—the application of warmth or cold, and the like, may, to a great extent, be determined by the power of reason, when an acquaintance is gained with the facts of the case—the nature of the causes or processes then acting, and which it is desired to remove; because we know by experience the properties of the agents to be employed, and it only requires that they be applied with reference to these properties, and to those needed to arrest or remove the particular process or cause under consideration. The latter class of treatment—*i. e.* the administration of drugs or the performance of operations—is different from the former. If we consider only those drugs or operations well known, the exact properties and effects of which have been determined by experience, these stand in the same light as the means of treatment which I have, for convenience, included under the head of regimen; all that is needed for their due application being, that we know the existing causes requiring to be removed, and adjust those particular remedies to their removal known to be capable of effecting it. But it is far otherwise when we come to the discovery of new remedies, in the form of drugs or operations. It may have been imagined that I was about to propose the induction of facts in anatomy, physiology, and morbid anatomy, as a means of discovering new remedial agents. But I believe that nothing but experiment can lead to the discovery of new remedies, in the form of drugs, or to a certain knowledge of the effect of operations. Many experiments must be made, and the properties of the drug, or the effects of the operation, in a large number of cases, examined, and justly estimated: the result of such a course of proceeding will be a knowledge of the nature of the remedial agents.

Experiments made without some appropriate set of ideas to guide their direction are tedious or fruitless; and indeed do not deserve the name of experiments—although they may occasionally, by some chance, produce an useful effect, or reveal a new truth.

For an experiment to be worthy of that name it must be directed with careful judgment towards some particular object—it should be the means resorted to when reason has brought the mind to a point which unaided reason is not sufficient to decide. The result of the experiment will then definitely answer the question proposed. Now the only way by which an experiment can be rendered so appropriate is this; to know well the nature of the object to which the experiment is directed. If the experiment have for its object to ascertain whether a process can be arrested by the application of a given agent, it is clear that such processes must be distinguished and particularised, and all circumstances relating to each learned first, in order that the experiment may be appropriately applied. It is equally clear, if the experiment have for its object to learn the power of any agent in removing changes in a part, that the causes of these changes must be learnt before the experiment can be appropriately applied. Hence it is shown that, although the properties of remedial agents can only be ascertained by experiments, these necessary experiments cannot be made with hope of success except they be directed by a set of ideas appropriate to the facts of the case; and this appropriateness of ideas cannot be attained until the causes and processes to which the effects are due—concerning which experiments are made—have been ascertained by the induction of facts.

In the commencement of this paper certain conditions were laid down, stated to be those essential to improvement. I have since endeavoured to supply these conditions with respect to the science of medicine and surgery; with what success I have supported the numerous assertions I have been obliged to make, and have explained my own ideas, must be left for others to judge. But believing I have shown reasons for the conclusions at which I have arrived, and endeavoured to conduct the mind of my reader, I must now assume all but one of the essential conditions of improvement in medicine and surgery to be established. 1st, we have ascertained the condition of medical and surgical knowledge at the present time. 2ndly, we have formed an ideal standard of perfection in this knowledge. 3rdly, we have pointed out what parts are necessary to bring medical and surgical knowledge from its present condition up to that of our standard of perfection. 4thly, we have determined the means by which these parts may be supplied. The fifth condition still remains unsupplied, *viz.* the order in which the deficient parts may be safely supplied; and

to the consideration of this I will proceed at once.

The deficient parts consist of "an acquaintance with causes and processes," and of treatment directed to their removal or arrest. I have taken pains to show that the treatment of disease cannot be rightly applied until the causes and processes to which it should be directed are determined. The question, then, as to the order in which the deficient parts should be supplied, is answered in favour of the former. A knowledge of the causes and processes of diseased changes must be supplied first: an acquaintance with the treatment of them will follow. And now, after a dissertation so long, and I can but fear tedious, I have arrived at the point where the great and important question with which I commenced may be satisfactorily answered. The question was—How shall we satisfy that ambition which makes us anxious to improve our profession? What is the step in improvement which, being directed, we may boldly take? The answer is—to apply our intellects sedulously to inductive reasoning, and to direct this to medicine and surgery. This is the first step, by taking which we may discover the causes and processes of disease.

The following question naturally arises in this place: if the necessary parts for the improvement of medical science can be supplied by means apparently so simple, why have they not been supplied by some of the many great men whose names we reverence in the annals of medicine and surgery? It is certainly a question of great interest, for, that such a step has not been taken, would seem almost an argument that it would not be attended with success. But if we enter more carefully into the subject, I believe the difficulty will be explained, and we shall rather be disposed to feel more convinced that our conclusion as to the necessities of our profession is correct, from observing how many difficulties lie in the path of those who strive to supply those necessities; how many insurmountable obstacles have laid before some who would otherwise have been most capable of performing the task. I conceive that the first circumstance which has deterred men from proceeding to the step I now point out has been that strong impression, so universally retained, of the little good and the apparent amount of evil, which resulted from the philosophy of the ancients in its application to medical science, and the evil consequences which have so often resulted, in later days, from speculations in these matters. This impression, the correctness of which we are now prepared to judge of, is undoubtedly very general; and as the

actions of men's lives, and the course of their mental career, are guided by the reigning impression in their minds, we are not surprised to find that the idea of applying philosophical reasoning to medical science could not attain to a complete development. The second cause is the advance made in a knowledge of the essential conditions of inductive reasoning, and in the extended appreciation of the truth, that *deduction*, except as a successor to *induction*, is worse than vain. This advance in knowledge teaches men that it is impossible to reason correctly, or even safely, in physical subjects, on any other basis than the acquaintance with correct facts. The existence of this cause, why men have been deterred from philosophising, adds strength to the effect of the next, which I believe to be, *the incalculable number of facts possessed in medical and surgical subjects*. The science of medicine is one of the most complicated of all the sciences; it derives facts from so many sources,—from anatomy, from physiology, morbid anatomy, chemistry, mechanics, from disease in the living body, from the effects of treatment, from every possible influence by which man is surrounded in health or in a state of disease. The number of individuals who follow our science, or rather our profession, and who contribute to the records of phenomena, is greater, perhaps, than in any other science: it is among the oldest of the sciences. Thus we perceive all those circumstances connected with it which are calculated to add most abundantly to the accumulation of facts, and in proportion to the number of course is the difficulty of reviewing them increased. A fourth cause of the effect in question is to be found in the extreme difficulty of deciding among the numerous observations, which are really worthy of the name of facts, which are well attested, which may be depended upon as elements of inductive reasoning. And lastly, I must call attention to a most important consideration, viz. the class of men who follow this science. Who are they, but the physicians and surgeons? not, as in mathematics, the closet students who may devote hour after hour to following out some cherished idea—to gathering the ideas of others, or the phenomena recorded by their predecessors; not, as in astronomy, men whose days may be devoted to undisturbed study, or to the teaching of scientific principles, and their nights in quiet, calm meditation in the observatory, with the facts for their induction placed before them with no less brilliancy than the stars; not, as in metaphysics, men whose duty and whose daily task it is to think upon series of facts, and to teach the results of their

combinations. Those who follow the science of medicine are the same men who practise medicine or surgery as a profession: their time is amply filled, their mental activity amply exerted, and often wearied, by a repeated observation of certain facts, and the repetition of certain imperfect and hurried inductions. They have every opportunity of observing for themselves facts which have been observed before, again and again, by others; and also, they have the opportunity of observing *new* facts, which in many cases they have not even time, and often not inclination, to record. To review those which others have collected is too frequently out of the question; and I hold that after a physician or surgeon is involved in extensive practice it is *impossible for him duly to review recorded facts as they now exist, for where can he look for any catalogue of facts on any one subject which even approaches to completeness?* Works abound in almost every branch of our science, but we find that the amount of new facts in each is comparatively nothing,—some one or two, perhaps; the rest are only new statements of those which have been stated again and again. To learn the real amount of recorded facts on any one subject it would be necessary to peruse every book ever written upon it, and to do this with such care as to distinguish and to gather from each those facts only which are new. Such a task is too tedious, too long, to be within the power of any man actively practising his profession, and surrounded by its necessary duties. We discover, then, from the consideration of this matter, more than ample reason why inductive philosophy has not been employed to supply the truths so grievously needed by the science of medicine. And we see plainly, that while the facts in our science, so immense in their amount, remain in their present scattered condition, much as we may wish for it—much as we may strive to obtain it, however clearly we may see its necessity and endeavour to supply it,—a philosophical period cannot be established in medical science.

It is with extreme pleasure that I reach this practical point, towards which I have especially directed my arguments, viz.—*The necessity for the separate collection of facts upon different subjects, in order that they may be reviewed with readiness, and thus render possible that philosophical reasoning which now cannot take place although the sufficient facts exist and be known.* Professor Whewell has made some observations which are very appropriate to this subject. He says: “thus invention, acuteness and connection of thought, are necessary, on

the one hand for the progress of philosophical knowledge, and on the other hand the precise application of these faculties to facts well known and clearly conceived. It is easy to point instances in which science has failed to advance, in consequence of the absence of one or the other of these requisites; indeed, by far the greater part of the course of the world, the history of most times and most countries, exhibit a condition thus stationary with respect to knowledge. The facts, the impressions on the senses, on which the first successful attempts at physical knowledge proceeded, were as well known, long before the time when they were thus turned to account, as at that period. The motions of the stars, and the effects of weight, were familiar to man before the rise of the Greek astronomy and mechanics, but the ‘diviner mind’ was still absent; the act of thought had not been exerted by which these facts were bound together under the form of laws and principles. And even at this day the tribes of uncivilized and half-civilized men, over the whole face of the earth, have before their eyes a vast body of facts of exactly the same nature as those with which Europe has built the stately fabric of her physical philosophy. But in almost every other part of the earth the process of the intellect, by which these facts become science, is unknown. The scientific faculty does not work—the scattered stones are, indeed, there, but the builder’s hand is wanted.”* Again, says the same author, “In tracing the progress of the various provinces of knowledge which come under our survey, it will be important for us to see that at all such epochs such a combination has occurred; that whenever any material step in general knowledge has been made—whenever any philosophical discovery arrests the attention—some man or men come before us who have possessed in an eminent degree a clearness of the ideas which belong to the subject in question, and who have applied such ideas in a vigorous and distinct manner to ascertained facts and exact observations.”†

It must have been observed, that while I have stated that the most important part of the deficient knowledge in medicine and surgery may be supplied by an act of reason applied to facts, most of which are, on many subjects, already possessed,—while I have stated my conviction that our science requires a philosophical period to recur in its history,—yet I have taken pains to show that *the existence of such a period is incompatible with the state in which our*

* Op. cit. vol. i. p. 9.

† Op. cit. vol. i. p. 7.

knowledge exists at the present day. If these statements have been observed, I have doubtless been anticipated in this conclusion,—that it is our duty to devote ourselves to collecting the scattered facts, and, as it were, to make out a catalogue of those possessed in each particular department and subdivision of medical and surgical knowledge. To continue the comparison of Whewell,—to bring “these scattered stones” within the reach of the builder’s hand, that he may construct the edifice.

In speaking of the progress of knowledge, Prof. Whewell remarks: “these primary movements, when the inductive process by which science is formed has been exercised in a more energetic and powerful manner, may be distinguished as the inductive epochs of scientific history, and they deserve our more express and pointed notice. They are, for the most part, marked by the great discoveries and the great philosophical names which all civilized nations have agreed in admiring. But, when we examine more clearly the history of such discoveries, we find that these epochs have not occurred suddenly and without preparation. They have been preceded by a period which we call their prelude, during which the ideas and facts on which they turned were called into action—were gradually evolved into clearness and connection, permanency and certainty,—till at last the discovery which marks the epoch seized and fixed for ever the truth which had, till then, been obscurely and doubtfully discovered”.*

It is this “prelude” to an inductive period that the science of medicine now requires, and the necessity for which I have endeavoured to demonstrate. One further and concluding remark on this subject must be made. It is to recall to memory the effect of the philosophical period of antiquity; that, although it failed to produce new truths, it benefited science by presenting a collection of the existing facts; thus pointing out what were the deficient materials, and exciting men to labour to supply these in the succeeding generations. We cannot doubt that in the present age any deficiencies thus pointed out would be supplied much more readily, and with far greater accuracy, than in the days of Aristotle or Galen.

Cottage Place, City Road, London.
Nov. 1851.

† Op. cit. vol. i. p. 12.

Medical Intelligence.

THE CHOLERA IN THE EAST, AND ITS PROGRESS TOWARDS EUROPE.

M. ROBINET submitted to the Academy of Medicine the following note, which he had received from Constantinople:—

“October 28th.—The cholera, after having ravaged Bassora and the Persian frontier, has arrived at Bagdad, where it is committing great ravages. In twenty days it has attacked 1008 persons. The disease will probably ascend the Tigris, and it will be here (Constantinople) by the next autumn, or at the beginning of the winter of 1852-53. The Board of Health has decided that it will not adopt any quarantine regulations, but will merely direct its attention to hygienic precautions.”

SWEATING SICKNESS IN FRANCE.

FOR several days past the sweating sickness has prevailed epidemically in the Commune of Gramat (Cahors), and has already caused a great many deaths. The authorities have taken the most active and vigorous measures to prevent its spread.

A MUNIFICENT GIFT OF EIGHT SCHOLARSHIPS TO KING’S COLLEGE.

DR. WARNEFORD, so well known for his munificence to the Birmingham School of Medicine, has just founded, in perpetuity, eight new scholarships of the annual value of £25 each, for the Medical Students of King’s College, London. Six of these (two to be filled up each year) are intended for the encouragement of a previous good education, as tested by an examination in Divinity, Greek, Latin, Mathematics, Modern History, and French or German, which will be held immediately after matriculation at King’s College, at the beginning of each October term. The subjects will this year be settled immediately after the sealing of the trust deed; in future, twelve months’ notice will be given. These scholarships will be filled up for the first time in October 1852, and will be tenable for three years on condition of a certificate of good conduct and diligence being produced at the close of each year. Two other scholarships tenable for two years (one to be filled each year) are designed for the benefit of *resident medical students*, and will be awarded to that student, who, having resided in the College rooms without blame during a considerable part of two years, shall thereupon pass the best examination in divinity, and in such professional subjects as are suitable to his standing. The first examination for this scholarship will take place at the close of the summer session in 1853.

ON THE INFLUENCE OF PHOSPHORUS-MATCH-MAKING ON THE HEALTH OF THE WORK-PEOPLE. BY DR. EBEL.

VARIOUS opinions have of late been advanced upon this subject. While many writers have attributed directly to this occupation the occurrence of necrosis, and a general cachexia predisposing to caries, some have traced these evils to other causes, or have considered that the vapour of phosphorus did not alone occasion them. Dr. Ebel gives a sketch of the present state of opinion on this point, and then relates the conclusions of his own investigations and observations in a large factory during five years.

Phosphoric necrosis has been observed in match-factories in Vienna, Nürnberg, Prague, Berlin, Erlangen, Würzburg, Saxony, Wirtemberg, Switzerland, France, and England.

In Germany, where the manufacture has been largely carried on, Lorinser of Vienna first described the disease with great accuracy. He believed that he had traced the injurious effects of phosphorus vapour on the human constitution as distinctly as those of lead, mercurial, or arsenical poisoning. The greatly increased use of phosphorus in the manufacture of lucifer matches, has, however, afforded better opportunities of investigating the nature and origin of the disease. This poisoning does not show itself suddenly and distinctly: it has not an acute form, but is slow and gradual in its operation, until it manifests itself under the form of necrosis of the inferior maxilla. The principal cause whence this originates was only traced to the volatilization of phosphorus, as late as 1834. The first case in which it was observed occurred in the year 1839, and was that of an aged person who had worked a long time at match-making, and died after a long illness. Again, in 1842, a case of the kind was observed in a woman, aged thirty-two years, with hectic fever. In the same year four other cases were noticed, three of which terminated fatally, and one was cured. Further, in 1844, three more cases occurred, the terminations of which are not known.

The malady, according to Lorinser, commences with toothache in one or more teeth of the upper or lower jaw, spreading more or less to both jaws, ceasing for a time, then again returning, especially on pressure. This is accompanied with tumefaction of the gums, while the adjoining soft parts of the cheeks exhibit erysipelatous inflammation, which spreads to a greater or less extent over the face and neck, and is attended with increased secretion of saliva. Fever now appears, with an aspect of general indisposition, pale countenance, loss

of appetite, thirst, and irregularity of the bowels. In the next place, the fangs of some of the teeth become loose, pus is formed, which collects in the socket and then finds its way to the cavity of the mouth, forming numerous sinuses. At these points the bone may be found denuded and roughened. The tumefaction spreads, destroying the form of the mouth, the bone becomes exposed, and a profuse fetid purulent discharge flows from them. Sometimes at this period, especially in the stronger subjects, there is seen an arrest of ulceration of the soft parts and bony structures, an exfoliation of the necrosed bone, and a development of new bone, with cicatrization and recovery. Generally, however, particularly in strumous constitutions, hectic fever and tubercular deposit take place, which terminate this long and painful disease of the bones by death.

Lorinser believes that the origin of the disease is to be sought in the specific action of the phosphorus vapour, and in no other source. Struma and tubercular disease are often met coincidentally with it, and favouring the development of the malady, but it often attacks others of different constitutions: this circumstance therefore offers no obstacle to the view that attributes its origin to the impregnation of the atmosphere with the phosphorus vapours to which the workmen are exposed, and under which conditions the disease was first, and has been most frequently observed. The vapours gain admission into the system by the skin, by the breath, and by the mouth; owing to their intermixture with the mass of the blood, the processes of digestion and sanguification are interfered with, and thus in the course of time a definite dyscrasia, a state of general ill-health, is formed, which manifests itself by the patient's aspect, discoloration of the skin, and disturbance of the functions of the abdominal and thoracic organs. It is doubtful whether the phosphorus produces the injury in the first instance by its local action on the maxillary bones through the immediate application of the phosphoric vapours to the mucous membrane of the mouth, whence the morbid action extends to the periosteum. In this view the disease consists of a chemical action, the local disease being attended with constitutional derangement. As the general disturbance proceeds, necrosis takes place, and the teeth become loose and fall out. Lorinser's theory further considers that the blood becomes surcharged with phosphorus, the excess being deposited in the bones, while the immediate local action of the fumes of phosphorus determine the localization of the morbid process in the inferior maxilla.

There is some difficulty in answering the question whether the disease of the maxillary bones is the direct result of the local chemical action of the phosphorus vapour; or whether it is a secondary effect of deeper-seated general derangement of the health.

Two different methods present themselves by which we may arrive at the determination of the law by which the morbid chemical process is directed. In one, more especially, the phosphorus fumes, which in the preparation of the match materials are taken directly into the mouth, injure the mucous membrane around the teeth, and when caries of the teeth exists, come in contact with the bone itself. The vapours consist of phosphorous and phosphoric acids. Phosphoric acid combines with the lime in the bones, forming bone earth, which exists in them as basic phosphate of lime, insoluble in water, constituting the main element of bone. By the addition of an excess of acid, this phosphate becomes soluble, and dissolves, indeed, almost in the air alone. The bone, therefore, by the increase of the superabundant phosphorous and phosphoric acids, loses its insoluble inorganic base, whence loosening, inflammation, and abscesses of the teeth form: these extend to the bones of the maxillæ, attacking even the bones of the skull, and at a later period, by absorption, producing constitutional disturbance and cachexia.

By the other mode the fumes of phosphorus are supposed to be taken into the body by the skin, nostrils, mouth, and air-tubes, and becoming oxidised during respiration, enter the blood as phosphoric acid, and thereby induce caries; wherefore, according to this view, the local disease of the bones, and all the other morbid phenomena, are of a secondary kind.

Great probability exists that both these views are correct. Noxious substances received into the body in the form of gases, produce their evil effects with facility: even when administered in considerable doses for therapeutic purposes, they effect such changes in the condition of the blood as to give rise to morbid phenomena in other parts of the body, and exert a decided injurious influence over the phenomena of disease.

Jünken's theory* is a little less chemical and conformable to nature. In this view, the development of the dyscrasia is owing to ulceration of the maxillary bones. The foetid discharge from the mouth becomes still more offensive, and being mixed with the saliva enters the stomach at the same time that it infects the air that is breathed by the individual. In this way the blood becomes doubly poisoned. Digestion is al-

ready impaired by the defective mastication. The constant pains in the teeth induce sleeplessness and nervous excitement. The cause of the poisoning of the blood is thus apparent. The patient begets his own poison, wherein, nevertheless, the influence of the phosphoric fumes, and their noxious influence on the blood-mass cannot be denied.

In the Canton of Zurich, where there are twelve factories, several cases of this disease appeared in the year 1841, and a commission was appointed to report thereon. From their inquiries, it appeared that girls from eight to sixteen years of age are for the most part employed, that their appearance is pale and wan, that they constantly complain of pains in the knees and ankles, with enlargement of the bones; that scrofulous symptoms of thoracic disease are very common,—such as inflammation, pleuritic pains, hæmoptysis, and other phthisical symptoms, and that in two or three cases disease of the maxillæ had terminated fatally. The most prominent symptoms were pains in the gums and teeth on one side, swelling of the gums and their detachment from the bone, a discharge of greenish-yellow or dark-red foetid pus, extension of the destructive process to the whole jaw, falling out of the teeth, formation of fistulæ, emaciation, debility, rigors, hectic fever, sallowness of the countenance, diarrhœa, loss of appetite, severe thirst, sleeplessness, small, feeble pulse.

According to Heyfelder, the gums are removed from the bone by a deposit of substance resembling tartar; inflammation of the bone, necrosis, and the formation of new bone follow on this, and the newly-formed bone is disposed to caries, whereby it becomes porous.

Others trace the disease to the elimination of arsenic in the processes of the manufacture. Arsenic, however, does not become gaseous at ordinary temperatures, and has not been detected by Bibra, even in the minutest quantities, although he examined ten thousand matches.

Geist stated the number of cases in the Vienna, Nürnberg, and Berlin factories to be sixty-eight, of which five were males, the rest females, and nearly all between twenty and thirty years of age. Of these fifteen recovered, fifteen died, and fifteen were at the time under treatment: of twenty-three the result was not known. In twenty-three the disease was in the upper, and in twenty-six in the lower jaw. In five cases both bones were diseased.

The prognosis of this disease is unfavourable. The prevention or diminution of its frequency is to be obtained by free ventilation, or the performance of the work in the open air, and the selection of healthy

* See MED. GAZ. vol. vii. new series, p. 306.

individuals, avoiding those of a strumous or consumptive habit; observing also that no disease of the teeth or gums exists. With regard to direct treatment, art can do little. Among the special therapeutic means are astringent lotions, warm baths, fresh air, tonics, and narcotics to allay pain if severe. A nourishing animal diet to be taken at the same time.

Dr. Bauer proposed that the workers in the match factories should wear a mask, furnished with a sponge containing an alkaline solution, which should intercept the entrance of the vapours into the mouth and nostrils. Great cleanliness must be observed, the mouth being frequently washed with alkaline solutions.

Geist, regarding the disease in the first instance as an inflammation of the bone, inducing secondary fever, treats it at first by antiphlogistic means. Dr. Helfft regards the disease as periostitis.

The author (Dr. Ebel) traces at great length the various opinions of French and English writers on this disease, and concludes his investigations with the following propositions:—

1. That the vapour of phosphorus exerts no specially injurious influence on the health of the work-people.

2. That they neither originate nor favour the production of necrosis, even where a morbid condition of the teeth exists.

3. That the disease in most cases must be attributed to other causes,—as scrofulous, rickety, and cachectic constitutions, and to rheumatism.

4. By attention to the hygienic conditions of the work-rooms, ventilation, dryness, &c., and by the selection of healthy individuals, the disease may be averted.—

Casper's Wochenschrift.

X

RESOLUTION OF THE ISLINGTON MEDICAL CONVERSATIONAL SOCIETY ON THE HOMŒOPATHIC IMPOSTURE.

THE following resolution was unanimously agreed to at a meeting of the above Society, held on Tuesday, the 18th instant. This Society includes a large number of the practitioners of this district, and all those of the longest standing in practice.

“Resolved,—That the members of this Society, seeing the extent to which the public is imposed upon by the form of quackery called *Homœopathy*, feel it to be their duty to state that they can in no case sanction such imposture; but, on the contrary, repudiate all connection therewith, and, in the most unqualified terms, declare such practice to be sheer ignorance or dishonesty, and therefore dangerous to the public well-being. And further, that the members of this Society do pledge themselves that they will not knowingly meet in professional consultation any per-

son practising that delusion, as such persons have clearly placed themselves beyond the pale of legitimate medical science.

“NATH. HENRY CLIFTON,
“Hon. Sec.”

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Nov. 22.

| BIRTHS. | | DEATHS. | |
|-----------|------|-----------|------|
| Males.... | 723 | Males.... | 555 |
| Females.. | 658 | Females.. | 577 |
| | 1381 | | 1132 |

CAUSES OF DEATH.

| | |
|--|------|
| ALL CAUSES | 1132 |
| SPECIFIED CAUSES | 1122 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 240 |
| <i>Sporadic Diseases, viz.—</i> | |
| 1. Dropsy, Cancer, &c. | 37 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 123 |
| 4. Heart and Bloodvessels..... | 57 |
| 5. Lungs and organs of Respiration | 256 |
| 6. Stomach, Liver, &c. | 51 |
| 7. Diseases of the Kidneys, &c. | 8 |
| 8. Childbirth, Diseases of Uterus, &c. | 3 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 9 |
| 10. Skin..... | 2 |
| 11. Premature Birth | 0 |
| 12. Old Age | 53 |
| 13. Sudden Deaths..... | 5 |
| 14. Violence, Privation, Cold, &c.... | 35 |

The following is a selection of the numbers of Deaths from the most important special causes

| | | | |
|--------------------|----|------------------|-----|
| Small-pox..... | 31 | Convulsions..... | 39 |
| Measles..... | 19 | Bronchitis | 103 |
| Scarlatina | 45 | Pneumonia | 105 |
| Hooping-cough | 27 | Phthisis | 135 |
| Diarrhœa..... | 21 | Lungs | 12 |
| Cholera..... | 0 | Teething | 5 |
| Typhus..... | 62 | Stomach | 5 |
| Dropsy | 15 | Liver..... | 13 |
| Hydrocephalus | 26 | Childbirth | 3 |
| Apoplexy | 34 | Uterus | 3 |
| Paralysis | 16 | | |

REMARKS.—The total number of deaths was 140 above the average mortality of the 47th week of ten previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 29.77
 ” ” ” Thermometer^a 35.1
 Self-registering do.^b Max. 0.0 Min. 17.
^a From 12 observations daily. ^b Sun.

RAIN, in inches, .01. — Sum of the daily observations taken at 9 o'clock.

NOTICES TO CORRESPONDENTS.

Dr. Speer's communication on the Stethoscope has been received, and will be inserted.

Dr. Thomas Holland's letter has been forwarded to the publishers, to whom it should have been addressed.

We have to acknowledge the receipt of another paper from Dr. Russell. This will be inserted on an early occasion.

The King's College Hospital Report has come to hand, but, with several papers which are in type, is unavoidably postponed.

A Medical Student.—No other list has been issued than that printed in our No. for Oct. 31.

Mr. Crouch's case of Parturition will be inserted.

Corrigendum.—In Mr. Roper's letter, at page 824, col. 2, line 24 from top, for “mess,” read “nip.”

Original Communications.

ON

CLEFT PALATE,

WITH CASES IN ILLUSTRATION OF ITS
SUCCESSFUL TREATMENT.

BY GEORGE FREDERICK LANE, ESQ.
Resident Surgeon at the Royal Free Hospital.

(Read before the *Abernethian Society*,
Feb. 13, 1851).

[Concluded from page 924.]

FROM the earliest period when an operation for uniting cleft palate was resorted to, up to the time when Prof. Fergusson's paper was published in 1844, but little improvement of this troublesome affection had been suggested, beyond various collateral incisions into the neighbouring soft parts, as practised by Dieffenbach, Roux, and others, for the purpose of preventing, or relieving, the tension of the flaps which occurs when they are brought together by sutures. In that paper he described an entirely new method of operating, the principle of which had been suggested to his mind during a careful study of the anatomy and physiology of the soft palate, both in its natural and in its cleft condition. From these investigations he discovered that the action of the muscles of the palate was a serious obstacle to the success of the operation of staphyloraphy as previously practised. He therefore proposed "that the surgeon should, on strictly scientific principles of myotomy, so conduct his incisions as to destroy all motory power in the soft palate, for the time being, and thus permit that repose of the stretched velum so essential to a happy result."*

This improvement in the operation was the more necessary, as its complete failure, owing to some cause or other, had been of no uncommon occurrence, even in the hands of skilful men; and, consequently, the operation was frequently declined, on the ground of its doubtful result and the difficulty of performing it. The afflicted applicant was thus compelled to continue in the same state, unfit for society, and unable to swallow his daily food with comfort.

The conclusions which Mr. Fergusson arrived at were:—

1. That the flaps are drawn upwards and to the sides when the levator palati muscles contract.

2. That, when the levator palati and palato-pharyngeus act strongly together, the flaps are so forcibly drawn from the mesial gap that they can scarcely be distinguished from the sides of the pharynx.

3. That the parts are forced together when the superior constrictor contracts during the act of deglutition.

4. That the circumflexus-palati possesses but a feeble action over the flaps.

The principle of this operation is to divide those muscles of the palate which have the power of drawing the flaps from each other, in order that the parts may be placed in a state of repose, and the joined edges of the cleft may not be pulled asunder by any convulsive action of these muscles during the process of union; the muscular wounds healing simultaneously with the fissured velum. The course adopted by Mr. Fergusson is obviously a right one; and, were the same system pursued in the investigation of truth in all instances, I apprehend more satisfactory results would be obtained. The direction given to surgical treatment suggested by an accurate knowledge of the anatomy and physiology of the parts concerned, is one of the greatest improvements of modern practice.

In considering the relative merits of the two operations, great disadvantage is experienced in our being unable to call in correct statistical reports of cases. Such reports cannot be advantageously adduced for or against either proceeding, in consequence of their not furnishing an accurate account as to how many times the operation of staphyloraphy has been performed. As regards the experience of the eminent surgeons of this metropolis, who have devoted some time and attention to this subject, each method has proved successful, with rare exceptions, in their respective hands.

Cases in which the new proceeding has been deemed inadvisable have succeeded under the old operation.* On the other hand, cases which have failed, more than once, under the old proceed-

* *Medico-Chirurgical Transactions*, vol. xxviii. XLVIII.—1253. Dec. 5, 1851.

* A case of this kind has been mentioned to me by my friend Mr. Savory.

ing, have succeeded entirely on the first trial of the new method. Of these may be mentioned Mr. Tuson's case, in which three previous operations had failed, and Mr. Bowman's case, in which he operated first according to the old plan, but unsuccessfully; and subsequently, on performing Prof. Ferguson's operation on the same patient, he succeeded.*

From many cases that have come to my knowledge, I presume that the operation for cleft palate, as usually performed, is frequently unsuccessful, and that it is among those operations in surgery which are least certain in their results. Its unfavourable issue is not so frequently owing to an unskilful performance of the operation, as to a non-appreciation of the causes usually interfering with the healing of the parts, and the consequent inability of the operator to effect their removal, so as to place the flaps in a favourable position for their union when brought together by sutures. I apprehend that the principal obstacle to the union of the pared margins of the flaps, when thus approximated, consists in the involuntary movements of the parts caused by muscular action; and that this is sometimes so vigorous as materially to interfere with bringing them together. That this muscular resistance is not merely hypothetical the opinions of many who have written on this subject will testify. Sir Phillip Crampton remarks:—

"Retraction of the edges of the fissure, effected by the muscles of the palate, has always been acknowledged."†

Pancoast observes, speaking of the incisions requisite:—

"To divide the insertion of the palate muscles, so as to prevent their straining the sutured edges of the palate asunder."‡

Warren observes, alluding to the flaps:—

"They could be partially drawn out, though with great resistance."§

Another authority states:—

"From the involuntary movement of the flaps there is much risk of failure."

* To these may be added Mr. Gay's case, to be presently related.

† Dublin Journal of Medicine, vol. xxii. p. 134.

‡ American Journal of Medical Science, vol. xxxii. p. 71.

§ New England Quarterly Journal of Medicine and Surgery, 1843.

A question naturally arises—What muscles are instrumental in the production of this resistance to the approximation of the flaps?

Referring to a recent work upon Operative Surgery,* we find the circumflexus-palati has a greater influence assigned to it, in this respect, than the other muscles of the soft palate. Judging from the fact that the greater part of this muscle has a fixed bony insertion, and from the extremely small effect produced upon the corresponding flap by pulling at the fleshy belly of the muscle in dissected specimens of cleft palate, we should draw a different conclusion; especially when we observe the opposite condition of the levator-palati and palato-pharyngeus, and the altogether different effect produced upon the flaps by the slightest traction in the axis of the first of these muscles in similar specimens. The levator-palati, palato-pharyngeus, and palato-glossus, appear to me to be the muscles concerned in producing the tension alluded to, but more especially the former; and, in proof of this action, if any further evidence is wanting, I may advert to the negative evidence afforded by the complete relaxation of the flaps on the division of these muscles, and the removal of all resistance by the incisions requisite for this purpose, which are of such a character as to afford no other reason for this than the division of the muscles themselves.

Without attributing all the tension in the flaps, caused by bringing them together, to muscular action, because the small size of the flaps in some instances, and the consequent wideness of the cleft, must operate materially in producing it, in particular cases, where it is very great, yet I think it must be evident that the muscular action of the parts is detrimental to their union; and that, if this can be removed without placing the patient in a more unfavourable position than he occupied before, as regards the operation, it is desirable to do so. That the patient is in a more advantageous state for the healthy union of the fissure, I will endeavour to show presently. There can be no great objection to the division of the tensor palati, if it be proved that the parts will not unite readily without, and in that case it should be divided at the

* Operative Surgery, by Frederic C. Skey, F.R.S.

place most convenient to restrain its action.

Now the longitudinal incision through the palate, as recommended by Dieffenbach, is an application of the same kind of treatment that is practised upon the perineum, and other parts, in cases in which the tension is occasioned, not by the muscles acting on the incised parts, so much as by a stretching of them in certain movements of the body, or resulting from a loss of substance in the gap to be filled up by simple approximation of its edges.

In the case of cleft palate, it appears to me that the conditions are not similar, and that the incisions, were they necessary for this purpose, irrespective of the action of the levator palati, would be advantageously made on the upper surface of the velum rather than the lower, on account of the elevation of the flaps, accompanying the very high arch of the palate in such cases.

It has been urged by some, who still remain attached to the old method, that the various incisions suggested by Dieffenbach, Pancoast, and others, for relieving the tension of the parts, would include considerable portions of the muscles in question: but it should be remarked, that these incisions are not calculated to effect this purpose, from their being made for the most part in the direction of the muscular fibres, instead of across them: the only muscle that would be likely to be divided is the tensor palati, and the tendinous expansion of that muscle being situated near the upper surface of the velum, would require the incision to extend through the soft palate, and pass into the nose in order to ensure its division.

Among the disadvantages of this incision, as compared with the other, did it answer the purpose intended, may be enumerated the following:—

1. The larger size of the wounds.
2. The severity of the pain occasioned by the greater sensibility of the parts incised, and consequent excess of inflammation, frequently of an unhealthy character, ensuing.
3. The kind of wound, which is almost entirely glandular, and is more likely to be the seat of unhealthy inflammation, when there is a tendency to it, than a muscular wound.
4. The irritation of the wounds by the necessary amount of nourishment.

5. Their near proximity to the cleft, where it is desirable that the healthy process should go on quietly.

6. The difficulty of swallowing, from the greater soreness of the parts, as ascertained from patients themselves.

To these may be added the want of success in the old operation generally; of which, numerous instances, were it necessary, might be adduced.

On the other hand, in Fergusson's operation, if I am not greatly mistaken, the majority of these objections are absent. The patient can take nourishment with comparative ease; there is less pain both during and after the operation; the wounds are at a distance from the cleft, and consequently they do not interfere with the union of the parts. The incisions themselves are not so much in the way of irritation, so that the patient can take nutrient fluids, from the first, without inconvenience: besides these, as a result of the different principle of the operation, the flaps are rendered loose and flaccid, being for the time almost completely paralysed. The operation is in no respect more difficult, and is generally attended with less bleeding.

Since Mr. Fergusson first made known his operation to the profession, in a paper read before the Medico-Chirurgical Society in 1844, others have had opportunities of practising it; and though the views held out in that elaborate and valuable paper have been very tardily received, yet, unlike many new operative proceedings, it has met with almost invariable success in the hands of all who have put it in practice. Mr. Avery has informed me of seven cases in which he has operated for fissure implicating the hard palate, as well as simple fissure of the velum, all of which succeeded perfectly. A detailed account of three of these cases is contained in the *Lancet*, Sept. 21, 1850.

Of the 29 cases recorded by Messrs. Fergusson and Avery, 26 were successful. Some of these were very unfavourable, as the ordinary operation had already failed. Of the three failures, two were unfit cases for any operation; in one, Dr. Warren's plan of separating the tissues from the hard palate was tried; another (a case of Mr. Shaw), is stated to have been unfavourable for any operation: the failure of the third, Mr. Fergusson attributed to removing the sutures on the second day, the flaps

having separated during the subsequent night.

The fourth case in the paper alluded to is enough of itself, one would suppose, to place this operation on an equal footing, at least, with the older method: the patient had been three times operated upon by Mr. Tuson, of the Middlesex Hospital, but without success; yet, on being operated on by Prof. Fergusson, the union was perfect throughout, "with the exception of a small aperture in front, a little larger than might admit a probe."

There are some important points in the operation which may be here alluded to. Advantage will result from including a good portion of the soft parts in the sutures, in order that that amount of tightness necessary to keep the edges of the fissure in close contact, and preclude the intervention of mucus, may not produce strangulation of the parts. In tying the sutures by means of a loop of one end slipped down on the other, in consequence of the sudden and jerking manner in which it sometimes passes down, there is much difficulty in controlling the tightness to which it is pulled; hence, the more simple method is often preferable.

Sufficient substance should be pared off the margins of the fissure to expose as large a surface as convenient for union, and the slip removed from each flap should be taken off in one continuous piece, so that no part may escape; and, to effect this, the knife should be passed through from below, at about an eighth of an inch from the margin; and commencing at the base of the uvula, it should be carried up to an eighth of an inch in front of the angle of the cleft: then, without detaching it in front, the remaining part—viz., the side of the uvula, should be pared with great care; the same process should be repeated on the other side, after which, the two may be separated in one continuous piece by carrying the knife round in front, or each side may be detached separately.

The margins should be pared before any incisions to divide the muscles are made, or it should not be done till the bleeding from these is arrested, as the blood prevents a good view of the edges: this being a very important part of the operation.

It is advisable to commence tying the

sutures at the part approximated with most difficulty—viz., in front. An advantage of introducing both stitches from the under surface of the velum is, that they can be placed opposite each other with much greater precision; but, in carrying the sutures from one side to the other, the method used by Mr. Avery has an advantage, from its simplicity, and not requiring any knots: a single ligature is passed through one side, by means of a strong curved needle, with the eye near the point, and set in a handle; when the loop is visible in the cleft it is seized with long forceps; the needle is withdrawn, and the loop pulled out of the mouth; one end is now drawn through, leaving a single ligature through the flap: a finer thread is now passed through the opposite side, and in the same way is seized, and the needle withdrawn, leaving the loop: the end of the single and larger thread is then passed through the loop, which being withdrawn by pulling at its two ends, carries the single thread through the opposite side, and is ready for tying.

Since as favourable a condition for the union of the parts as possible is desirable, the pillars of the fauces, and especially the palato-pharyngeus, should be divided in all instances, as well as the levator palati.

Great care is required, in the majority of cases, to close the most anterior part of the cleft, especially when it extends into the hard palate. This will be best attained, after the soft parts have been freely separated from the bone at the angle of the cleft, by division of the upper part of each flap, from the posterior border of the hard palate, by means of sharp-pointed scissors curved on the flat, cutting into the nose. By this means part of the insertion of the tensor palati is cut away, which, together with the dissection of the tissues from the hard palate for some distance in front of the cleft, will produce considerable relaxation of the parts. When, owing to the wideness of the cleft, much tension is occasioned near the hard palate by bringing the sides together, a longitudinal incision might be made with advantage on the under surface of the velum, between the cleft and the alveolar border; but confined to the spot occupied by the tendinous expansion of the tensor palati.

In conclusion, I would remark that the vascularity of the soft palate is so

great that no apprehension need be entertained that the incisions which have been recommended will not heal rapidly, provided the health of the individual is not suffering from any other cause, and in such a case the operation should be deferred.

Since the foregoing paper was communicated to the Abernethian Society of St. Bartholomew's Hospital, four other cases have come under my observation, occurring in the practice of Mr. Gay, three of which are at the present time in the Royal Free Hospital.

CASE II.—Eliza Smith, aged 23, was admitted into the hospital Oct. 14 of the present year, having come from Ewell, near Dover. This patient had previously undergone an operation, and has been alluded to before.

On examination, a fissure was seen extending through the velum, and slightly implicating the hard palate. The halves of the palate were perfectly sound, nearly nine months having elapsed since the former operation was performed; and the tissues did not appear to have undergone much change by having been already operated upon. Her general health was good; and, in order that she might be in a favourable condition in this respect, the operation was performed at once. Accordingly, on the 16th, the weather being fine, Mr. Gay proceeded to operate in the presence of Messrs. Avery, Dempsey, Jackson, and Davenport.

The levator palati of each side was first divided, afterwards the posterior pillar of the fauces, and then, to a slight extent, the anterior pillar of one side. By section of these muscles the palatal movements were tolerably controlled, and the flaps were rendered loose. The edges of the cleft were now freely pared, and the soft parts detached from the under surface of the hard palate for about three or four lines forwards on each side. The edges were brought together by four sutures, the parts about the anterior suture being rather tense. After division of the levator palati some relaxation of the parts took place, but it was most considerable after the palato-pharyngei were divided. A little bleeding occurred, but was readily arrested by iced water. The operation occupied nearly three-quarters of an hour. The patient was afterwards kept in bed and not allowed to

speak. Nourishing fluids were given in small quantities and often, the fluid being carried to the back part of the pharynx in a spoon.

On the 19th slight suppuration had commenced; the edges of the flaps had remained in close contact, except in front of the anterior stitch; she complained of smarting pain and the disagreeable odour arising from the palate; there was no undue inflammation of the parts or constitutional disturbance.

21st. — Posterior suture removed; parts keep in good apposition.

22d. — Next suture removed.

23d. — The two remaining sutures taken out.

24th. — She has commenced eating solid food; a small quantity of matter exudes from the unclosed part, which is immediately behind the hard palate, and about the size of a quill; the rest of the palate remains united.

31st. — The part which was found not to have united is gradually closing without any application.

Nov. 20th. — The opening will but admit a probe, and is healing up.

CASE III.—Mary Bryan, æt. 21 years. This patient originally had a fissure of both hard and soft palate, extending through the alveolar margin, and complicated with hare-lip and considerable projection forwards of that portion of the upper jaw bearing the front teeth. Mr. Gay operated on the hare lip several months ago; and the patient was admitted, Oct. 8th, for the purpose of attempting to remedy the defect in the bony structures, preparatory to uniting the cleft in the soft palate. It was observed that, as usual, the fissure in the hard palate was to the left of the mesial line, leaving the septum nasi attached inferiorly to the right margin of the cleft. The projecting portions of alveolar border were broken down, after being partially sawn through from the inside, and the teeth brought into contact by these means were carefully bound together with silver wire. Three weeks afterwards the septum nasi was severed above, by means of small angular bone forceps, and then pulled down across the fissure by a curved hook, so as to come in contact with the opposite side, to which it was united by strong suture. The case is going on well, and the soft palate, the two halves of which come together easily at their posterior part during deglutition, will

be operated upon as soon as the union of the other parts has become quite firm.

The condition of the fissure in this case, and the relation it held to the septum nasi, is the same as in the dissection of the child's palate before alluded to; and probably it will be found in similar cases that the situation of the septum nasi is such, that a sufficiency of substance may be found here to close the fissure in its neighbourhood. The fact of complete fissure of the hard palate never occurring in the mesial line, unless there is double hare-lip and fissure of the alveolar arch, is remarkable; and it is attributed by M. Petrequin* to the circumstance, that originally the intermaxillary bone intervenes between the two halves of the upper jaw, and causes the fissure anterior to the palate bones to pass to either side—most frequently to the left.

CASE IV.—Wm. Wortley, æt. 23 years, of light complexion, dark hair, by trade a tailor, was admitted into the Royal Free Hospital Nov. 17th, under the care of Mr. Gay. He was suffering from gonorrhœa, but in other respects appeared in good health. He entered the hospital with the view of having "something done for his throat," which was the source of inconvenience to him, and on examination was found to be fissured as far forwards as to involve $\frac{1}{8}$ th of an inch of the hard palate; the anterior diameter of the fissure close to the posterior border of the hard palate was $\frac{3}{8}$ th of an inch, and the posterior diameter between the halves of the uvula was 1 inch and $\frac{3}{8}$ th; the whole length of the fissure being 1 inch and $\frac{5}{8}$ th: these measurements were ascertained by means of a bent probe. On irritating the flaps they were suddenly drawn upwards and apart; during irritation of the posterior wall of the pharynx the sides were approximated, but met together only at the posterior part.

His speech was better than that of the majority of persons affected with this deformity, and he stated that by drinking slowly he rarely found any of the fluid pass into his nose. There existed an additional complication of hare-lip on the left side, with flattening and depression of the left ala nasi; the hare-lip had been united twelve years,

but the altered position of the ala of the nose had not been restored. On examining the upper jaw, an irregularity was observed corresponding to the interval between the left lateral incisor and the canine teeth. He was ordered sulphate of zinc injection, and two of the aperient pills of the hospital.

Nov. 18th, at 2 P.M., Mr. Gay operated, Messrs. Wakley, Avery, Walton, and others being present. The division of the muscles was made as before described; but the muscular resistance of the flaps being great, the incisions above the soft palate were made more freely than usual, so that the flaps hung down and nearly touched; considerable bleeding followed this, but it was controlled by means of iced water. The tissues were then separated from the palate bones around the front of the cleft, and the margins of the flaps were pared; six sutures were applied, and in tying them the knots were placed on alternate sides of the fissure. The operation was extended over a period of an hour and three-quarters, and the patient submitted to it with remarkable determination.

10 P.M.—Skin hot, pulse 88. Complaints of thirst and soreness about the throat; the slightest movement of any muscles of the pharynx appears to give him great pain. A pad of lint was placed underneath the lower jaw, and held by means of a few turns of a bandage round the head, to assist in keeping the parts at rest, as employed by Pancoast. Being unable to swallow, an enema of gruel with two drachms of laudanum was given.

19th.—Slept part of the night. Skin cool and moist; tongue slightly furred; pulse 88, small; finds advantage from the bandage. A clot has formed over the wound. Being still unable to swallow without great pain, he was ordered beef-tea injections, containing a glass of wine, and to take a little gruel.

10 P.M.—Skin hot; pulse 90; full and soft; head hot; sutured edges slightly grey at posterior part. He complains of soreness of throat and inability to swallow. A drachm of laudanum was given by the bowel.

20th.—Passed a tolerable night. Tongue moist, and coated with a white fur; pulse 92, small; breath foetid; bandage removed.

21st.—The posterior suture has given way, leaving the uvula ununited: there

* *Traité d'anatomie medico-chirurgicale et pathologique.*

is much less soreness of throat, and he can swallow without much trouble; there is slight suppuration apparent about the ligatures, without much inflammation, and the halves of the uvula have an ash-grey colour, but do not appear to be ulcerating. To take strong soup and rice milk.

22nd.—Was allowed to sit up a little yesterday. Countenance pale; pulse soft; skin cool; bowels open; a small portion, between the second and third sutures from the front of the velum, is sloughing. Complains of pain in his left ear. The parts to be lightly touched with lotion composed of Tinct. Myrrhæ ʒj., Dec. Cinchonæ ʒij. To take Acid. Sulph. Dil. m̄xv., Tinct. Cinch. ʒj., Decoct. Cinchonæ ʒj., three times a day, and good diet.

25th.—Ligatures removed; no ulceration; a considerable portion has united, but there is an oval opening towards the front which would admit a horse-bean. He can take food without difficulty.

29th.—All inflammation has subsided. He can swallow easily; the edges of the opening are healthy, are covered by granulations, and afford evidence of a tendency to close it.

Mr. Gay has informed me of another case which has occurred in his private practice.

CASE V.—Miss R., aged 24, with a congenital fissure of the soft palate, came from Manchester to consult Mr. Gay, and finally arranged to have the operation performed. The cleft did not extend into the hard palate; the halves of the uvula came together during deglutition. The operation was performed Oct. 5th, and the levator palati, palato-pharyngeus, and palato-glossus of each side were divided. Four sutures were employed, and the cleft was by these means brought fairly together. The inflammation was at first rather considerable, but did not impede the union of the parts. In this case, as commonly happens, all the fissure united except a small portion next the hard palate, where the flaps do not appear to be adequately relieved by the muscular section: this ordinarily closes afterwards by granulations, and in this instance has gradually filled up.

Royal Free Hospital,
Nov. 29th 1851.

ON
IMPROVING THE CONDITION
OF THE INSANE,

BY AN INCREASED INSPECTION OF PRIVATE
LUNATIC ASYLUMS.

BY HENRY MONRO, M.B., OXON,
Fellow of the Royal College of Physicians, Author
of "Remarks on Insanity," &c. &c.

[Continued from page 758.]

PART II.

An abstract of the last paper on this subject.

IN my last paper on improving the condition of the insane, published in the MEDICAL GAZETTE, October 31, 1851, I dwelt at some length on the necessity that existed for a very much increased inspection of private asylums by the Commissioners in Lunacy. I stated my belief, that a thorough and sufficient inspection was the only antidote to the evils to which the system of private asylums is of necessity and constitutionally prone; that this inspection could only be satisfactorily made by a board experienced in the history of the insane, their paradoxical peculiarities, and real needs; that the present inspection, occurring only once in three, four, five, or even six months, was utterly insufficient to do justice to all parties concerned in the confinement of a patient, whether the patient himself, the medical officers and superintendents, or the Commissioners; and that an inspection once in three weeks or once a month would not be more than sufficient for anything approaching to a thorough supervision and acquaintance with the wants and habitudes of the patients. I supported these views in detail by an endeavour to describe the sort of inspection which the public appear to require of the commission, stating that a general one, such as might suit large bodies of sane men, or departments where the general interests of the superior and inferior officers placed over these bodies were the same, as in the command of troops, the supervision of public schools, public jails, or even public lunatic asylums—would not be sufficient in the case of private lunatic asylums; because the patients, or body acted upon, was unable, from infirmity, to speak for itself;

and, second, the subaltern officers (*i. e.* proprietors, superintendents, &c.) had a distinct and opposing interest to the superior officers (*i. e.* Commissioners)—namely, private gain proportioned according to the length of residence of the patients.

These positions I supported by the practical experience of many years, giving instances to show that rare visitation was a cause of distress most injurious to the hope of a patient's recovery, inasmuch as it puts off from day to day the much-desired appeal to a disinterested tribunal; was a cause of anxiety most annoying to any sensitive and conscientious proprietor or superintendent, inasmuch as it deprived him of a very valuable and necessary referee in all matters of doubt and difficulty; was a means of necessitating an inaccurate and superficial judgment on the part of the Commissioners, which caused their opinion to have less importance than it ought to have; and I concluded with an earnest request that those in authority should enable the medical attendant to follow his peculiar calling of tending on the sick, and that he should not have his attention drawn off so unavoidably to the civil and legal position towards his patient as his present responsibilities necessitated.

The question, however, is full of important matter, to which I have not alluded. I will therefore trouble my reader with a few more statements before I conclude my observations on this subject.

Frequent visitation will afford a reference to a disinterested tribunal a short time after a patient's first confinement.

Amongst other benefits of a visitation occurring every three weeks or every month, the fact that a patient would thus enjoy access to a tribunal biassed rather in his favour than the contrary, a very short time after his consignment to an asylum, is perhaps the most important of all. For it must be generally acknowledged that, in a well conducted house, a patient suffers more on account of his loss of liberty, the opposition to his will, and the friendlessness of his position, at the commencement than at any future period of his confinement. I could bring forward many instances of this; but these would be useless and tedious when the common sense of the matter is so apparent.

For what is the state of affairs? When the patient first arrives he knows nothing, probably, of the character of the house, and of its superintendents; he comes a stranger among strangers, with every association and instinctive feeling prejudiced against them. In former times he has shared very probably in the national horror against a mad-house; it may be that insanity inherent in the family has increased this dread. He may have seen one, as it were, in the distance all his life; and, when he has thought upon it, he has clung to his home the more tenderly, his hearth has appeared to glow the more brightly, and his family to be more beloved than ever; while the dim dread that by fell disease he might be deprived of all these may have often cast an ominous cloud across his mind. But now what has suddenly happened? Where is that which was a dim vision—that which was wont to hang so lurid in the distant horizon of his life? It is a reality! it is upon him! sitting like an incubus, oppressing him in a most palpable form! And superadded to the already overwhelming thought that he is mad—that he is in a lunatic asylum—he finds that those he has the most loved and trusted have been the instruments, though the most unwilling instruments, of his consignment. It is of no avail now to argue that they did it for the best; for, though some few may appreciate and believe it, the senses of most patients convince them in a contrary direction; and, not knowing that their senses are erring, they do very naturally argue, “you cannot persuade me out of my senses.” All this is bad enough; but we must remember that all this is superadded to the burden which sent the patient mad. How terrible the strain must be! Such considerations as these are the arguments which rightly counterbalance the advantages of lunatic asylums, and which make it so very important to try more lenient measures before they are had recourse to. What *must* be the state of mind of many a patient so circumstanced, before continued kindness and sympathy on the part of those about him have disarmed his suspicions and anxieties? He would probably laugh in bitterness of spirit if you told him of the humanity and philanthropy of proprietors; for he is not only violently prejudiced against them, but he knows also that, when

any matter becomes a regular business, hearts are prone to grow tough, and tenderness is wont to be esteemed poetry.

Now I would say most distinctly that, at this sad commencement especially, a visit from kind and intelligent Commissioners may prove invaluable. The assurance conveyed by the sense that they will watch over and constantly visit him may often be of incalculable comfort to a patient. And the morbid suspicions entertained against those concerned in his detention may be often thus cut short.

But it must be borne in mind that I by no means imagine that all this good would be gained for all, or even for the generality; for I well know that the suspiciousness of the insane is too often beyond all reason and argument, even amongst those who are capable of appreciating many external truths, and who appear to be but partially insane; while to imagine that any moral means can reach the complete maniac—that any abstract reasoning can apply to him whose attention is wholly fixed upon the creations of his phrensied imagination—would of course be simply absurd. But be the number small who are capable of appreciating the advantages of having a disinterested referee, the intensity of their need makes up for their numerical deficiency.

I hope that, in speaking thus of the comfort derivable from the early presence of a visitor, I by this means should not appear to make little of what on the part of the medical and other attendants on the insane, a kindly tone, a sympathising glance (that page of nature more full of meaning than volumes), a delicate expression of feeling, and cheerful expression of hope can do; for these things will do much and act electrically on those who are keen to appreciate kindness, and can by instinct divide the real from the assumed.

But after a few weeks, the visit of the Commissioners, though still most important, cannot effect so much; for by this time the superintendent, the medical advisers, and others, have had good opportunity to show their genuine good will, if they possess it; and the patient may have learnt to trust in the just dealing of those about him. He may very probably still think them in error, but the state of mind which supposes

misconception, and that which suspects cruelty and a wish to make gain out of his sufferings, are very different. Patients will often say, after some acquaintance, "I believe you mean rightly; I do not accuse you of want of good intention; you are only all of you the victims of misconception." Some even will say, when they tell you of their phantasms and other delusions, "I know all this must appear madness to you, for you are not initiated as I am;" but the state of mind accompanying such remarks is anything but hostile, or calculated to be so injurious to a patient, as that which suspects common honesty of purpose.

An early visitation after the admission of a patient is moreover of peculiar advantage to all concerned in his detention. For at this time many such anxious matters as the following press, and peculiarly require a disinterested referee. Thus it may be desirable that a patient should not see his friends for two or three weeks at least. Objections raised on this account instantly excite the suspicions of the patient, and it is possible that the friends may not acquiesce in the propriety of this decision. At such time as this some disinterested third party—some fair and good judge who might support the opinion of the medical proprietor—would, be most useful. I do not mean to say that such an hypothesis is often verified, for the friends of patients are generally full of reliance on the opinion given to them; but still such a difficulty as this may and is more likely to occur during the first weeks, while the superintendent and friends are strangers, than when they become acquainted with one another.

Commissioners, moreover, thus frequently visiting, could take the responsibility of opening letters, &c., upon themselves; a task peculiarly disagreeable to any one of refined feelings, if he is not a perfectly disinterested party, and yet very often necessary for the safety and good of the patient, and that especially during the early stages of his residence.

All the questions which arise between a superintendent and a patient are peculiarly felt at first residence in a well conducted house. Among others, questions of the degree of liberty admissible, of the degree of restraint necessary, of the prospect of release, of the

meaning of what appears to be a mysterious circumstance in the matter of the patient's confinement, &c. A question, for instance, will often arise at the commencement of the patient's confinement, as to the propriety of telling him who were parties to his admission into the asylum, what relative gave the order, what medical men certified to his insanity and fitness for confinement. Such a question as this, to a fair-judging medical man, is often full of anxiety. I freely grant that it is easy enough to say, "I cannot tell you, I should transgress the bounds of my position if I did," or to answer in some other trite, though not the less irritating form. I grant, moreover, that in many cases it would do more harm than good to explain the whole truth in this matter. I grant that it is one of the most trying points of a medical adviser's judgment, and a responsibility which he must take upon himself, to settle whether the explanation that a patient's immediate family were the instruments of his detention would assure and comfort, or annoy and exasperate him; but still it would be a great relief to have the judgment arrived at strengthened by the opinion of a competent third party, and its truth attested by an unbiassed supporter.

An additional reason urging us to adopt every measure which is calculated to allay all reasonable ground for suspicion in our conduct towards the insane, is the fact that morbid suspiciousness forms one of the most distinctive characteristics of the insane.

In speaking of the necessity of an early visitation as a comfort to a patient after his admission to an asylum, I have often referred to the morbid suspiciousness of the insane. I hope I may not appear tedious if I dwell upon the matter a little; for it is a circumstance worthy of remark, *that the insane who are the victims peculiarly of this mental imperfection should be thrown amongst circumstances which peculiarly, and would, under ordinary circumstances, excite suspicion.*

The extent to which this morbid suspiciousness exists, may not be fully known to those who have had little experience in the treatment of the insane. This consideration, and the fact that it so frequently lies at the root of insane phenomena, induce me to dwell

upon this subject. Men generally imagine that definite delusions constitute the distinctive characteristics of an insane mind. These are no doubt the fully developed products of a morbid mind, and when they exist to any extravagant extent* we can no longer doubt as to the insanity of those who exhibit them. On this point all reasonable persons will agree. But in proportion as these delusions are definite and urgent, may the sufferer be said to be out of the reach of moral influence.

There are, however, periods which we must believe to be stages of an unsound mind, which comparatively escape the notice of superficial observers. To these, I would draw especial attention. It may be observed that in many cases, long before definite delusions occur, and probably for some time after they have disappeared, there lurks a peculiar condition of mind, which is chiefly characterised by the morbid suspiciousness above alluded to, and the genuine results of this suspiciousness, namely, extravagant conduct. We are, I believe, justified in thinking that this condition acts frequently as a substratum to distinct delusions, and that it has, as it were, a wider basis over the mind than the delusions; in other words, that it is more persistent, beginning earlier and fading away later. Delusions, moreover, seem to grow out of this state. But this state also *appears to be more subject to moral influence* than the fully developed stage of delusions. To use the words of metaphor, it would seem that that convulsion which is shaking the soil which has hitherto borne the good fruit of a sound mind has not at this stage completed its work, and that the new soil producing the evil fruits of delusions is not yet formed; that, therefore, means which may be available for good during the earlier stage, become useless at a later period. This state, so characterised by suspicion and consequent changes in conduct, may be esteemed to be a state

* I say extravagant extent, because it is little known how frequent delusions of less activity are. It is little known what unreasonable views on many subjects many who are considered sane hold. The delusions are comparatively harmless; they lead to no overt act, and bear probably, if they are exhibited, only the appearance of what are termed eccentricities. And to be fastidious, all in a certain sense who do not exercise a sound judgment, and who give undue importance to any matter, may be said to be deluded. This, however, is hypercritical.

when a vague general delusion or uncertainty about everything is hovering over the mind, and when all the ordinary bounds and bulwarks of a vigorous mind are fading away, but are not wholly gone. How very important, then, it is, for this stage particularly, that measures should be adopted which would allay all reasonable grounds for suspicion. Instead, however, of being careful on this matter, we have been in the habit of fostering and giving reasonable cause for suspicion.

An increased inspection might be the means of giving satisfactory information as to the comparative value of asylums.

Before I conclude the enumeration of advantages likely to arise out of an increased inspection of asylums, I would briefly allude to one indirect though not less important benefit which might arise therefrom. It is this—namely, that the increase of the Board required for this increased inspection might enable the Commissioners to aid in stopping the degradation to which our profession may be exposed by any persons connected with private lunatic asylums who may have recourse to conduct unbecoming their profession and position as gentlemen, as the best means of establishing their position. For with an increased staff at their disposal, is it not possible for the Commissioners to publish reports as to the state of many matters of detail in the various asylums under their charge, from which the friends of patients in search of respectable and good asylums might obtain satisfactory information? As things are at present, there is a great desideratum on this head. Friends of patients have but little means of obtaining advice, and are too often likely to be influenced by the conduct just alluded to. In some cases, they may take the opinion of their ordinary medical adviser; and, if he be a respectable man, it is probably the best course at their disposal; but even *he* is little able to know the comparative merits of asylums, even if his mind is unbiassed. The only body who can know anything of their comparative worth are the Commissioners themselves: they only have access to all asylums, and they, in consequence, can be the only satisfactory informants to friends wishing for the best advice. There certainly are

great difficulties in connection with this matter, and the Commissioners might well refuse to act as inspector and patron at the same time; for, no doubt, if they did so, unless great care was taken, much jealousy and ill-will might be engendered. But though anything like a minute statement of opinion as to the merits of houses might be unadvisable and injurious; upon certain facts—such as those connected with the extensiveness of the grounds, the good classification, the introduction of modern appliances into asylums, number of attendants in proportion to patients, &c.—the Commissioners might give information. On the present occasion, I would only throw out a hint on this subject, as I own that it is a matter fraught with difficulty, and as I propose to comment on this matter hereafter. The question, however, of seeking to obtain position by means unworthy of our position, is one which peculiarly requires the attention of the profession, if they wish to maintain its character and position unsullied. And I would add, that it daily becomes a more important one; for, as we happily live in an age when monopoly and exclusiveness are dying out, so we live in an age which requires the more caution against all dishonourable practices. In former times, a class interest might watch over the concerns of their profession, from private motives, with a sedulity which we cannot expect to witness when little standing ground is left to monopoly. But in these days, when the education of all members in the profession is assuming a high position of equality, when few privileges will soon be left to any, and when intellect will represent power, it is more than ever necessary that all should strive to shield our increasing army from harm, by expelling those guilty of unworthy conduct from its ranks.

Before I conclude this subject, I would urge a few suggestions on the propriety of having an increased Board of Commissioners, rather than any other body, to supply the required inspection. It is almost needless to oppose the impropriety of esteeming mere ordinary neighbours, however respectable their class, equal to this work. I need but ask any one at all conversant with the insane, whether he believes that an ordinarily good and intelligent man, but one who has had

no experience in the care of the insane, would be at all able to appreciate their paradoxical symptoms and capricious wants. It is mere quixotism to suppose that they would be, or that the condition of superintendents, proprietors, &c., could be comfortable while acting under such a tribunal. Among the qualities of mind necessary for an inspector of asylums to possess, the following four are conspicuous—humanity, common sense, freedom from all petty bias, and experience in the habits and wants of the insane. I place them here in the order of their importance; but, though I place experience last, it is by no means not essential. All that I would suggest by placing the other three before it is that, if I had a friend or brother in this condition, I had rather entrust him to those who possess the first three preeminently and the last only slightly, than the converse. I had rather run the hazard of the good and inexperienced, than encounter the hollow regard too often evinced by those who are termed men of experience. But this is as much as I can say; and, having said it, I must freely own that I believe the condition of all concerned in the matter would be very unfavourable if ample experience did not form a part of the mental endowments of our inspectors.

It may be suggested, why should not county magistrates, accompanied by medical advisers, fulfil this duty sufficiently? To this I would reply that, in their own sphere (the provinces), an increase of this body might very probably suit the necessities of the case; that I believe them to be worthy of all honour and respect on account of their general position, as well as the activity and zeal they have already evinced in the provinces; but that I have had no personal experience of their efficiency, that I can hardly believe that they constitute *as* efficient a tribunal as those whose only work it would be to attend to this matter; and that, in consequence, I should be sorry to see the metropolitan asylums placed under any other authority than that which already controls them. Added to this, I heartily believe that, if good additions were made to the Board of Commissioners, it must pre-eminently represent the qualities I have mentioned above, both on account of the high position of their character as a body, and the experience in medical and legal matters which they indivi-

dually possess. I need say no more on this subject, as I believe few would prefer the inspection of the provincial to that of the metropolitan districts.

Upon the Additional Expense which this increase would occasion.

The chief difficulty which would be raised against an increase of the Board would no doubt be the additional expense thence entailed upon the country. Upon this head I would be sparing and cautious in my remarks; for, while I feel that a medical practitioner has not only a perfect right, but a *direct call* to express himself boldly on all matters which fall under his immediate notice (and perhaps under his notice alone), he has little right to make suggestions as to the fiscal arrangements of the legislature. The question of salaries, and of the respectability and character which various amounts in salary can ensure, no doubt requires much and anxious consideration and experience. But if additional commissioners were enrolled, it is not, I presume, necessary that they should all hold equal rank, or rather that they all should have equal pay. The present stipend of our Commissioners is well known to be on a very liberal scale. I do not say that it is a bad economy to have the highest officers in any department as highly paid as they are, but I see no reason why there should not be juniors as well as seniors, or why half the amount of the present stipend might not ensure the accession to the Board of some of the most respectable members of the legal and medical profession, and of gentlemen of birth and position in society.

The increase to the Commissioners' Board which would be necessary to ensure a visit every month or three weeks would not be so great as might at first sight appear. For, first, it must be remembered that what I ask for is, not an increased inspection of all asylums, but only of *private* asylums. Second, to make the visitation three or four times as frequent as it is at present would not entail three or four times the amount of the work which the Board has at present on its hands; for the Commissioners have much to do besides visitation, for which the present Board might still be equal; while the additional members might give up their attention exclusively to visitation.

But I have already said enough on

this head. I feel that many injurious reflections may be raised against me for making even this allusion to the public purse in favour of what may seem to be a class interest. And certainly, if the proprietors were alone interested in increased inspection, the suggestion would be simply absurd. But the public will and must think of the patients in this matter: they are a people touchingly dependent on their sane brethren for support; they are wandering in a region where but few rays of comfort and hope enter, and are borne along on a course which has no bright horizon of hope, such as that which generally dawns on the elastic mind of the sane amid the greatest troubles. And yet they are brethren, borne along with us in the same vast river which is ever flowing towards the eternal ocean; their bitter cries rise up, mingled with our careless voices, from that broad stream towards the heavens above them, and both the complaints of the one and the insensibility of the other are registered there.

UNIVERSITY OF LONDON.

EXAMINATION PAPERS FOR THE M.D. EXAMINATION, 1851.

[The only papers for which we are able to find room are subjoined.]

Tuesday, November 25.—Morning, 10 to 1.

Medicine.

Examiners, Dr. BILLING and Dr. TWEEDIE.

1. Sketch the pathological causes and treatment of intestinal hæmorrhage.
2. Describe the structural alterations which the air-tubes occasionally undergo.
3. Contrast the diseases in which the administration of opium is beneficial, with those in which its employment is either doubtful or contra-indicated.
4. Describe the symptoms, forms, and treatment of iritis.

Tuesday, November 25.—Afternoon, 3 to 6.

Medicine.

Examiners, Dr. BILLING and Dr. TWEEDIE.

1. Mention the causes by which the heart may be displaced.
2. Sketch the different forms of insanity, and the morbid appearances that have been found in the brain after death.
3. Describe the varieties of scarlatina, and the complications that occasionally arise in its progress. Give an outline of the treatment.
4. Enumerate the pustular diseases of the skin. Describe the diagnostic characters, forms, and treatment of impetigo.

ESSAY ON

MENSTRUATION

IN SOME OF ITS PHYSIOLOGICAL AND
PATHOLOGICAL RELATIONS.

By ADOLPHUS HANNOVER, M.D.,
Of the University of Copenhagen.

[Translated by Edmund Hansen.]

[Concluded from p. 800.]

PART III.

WITH regard to the effect produced by the medicine on the menstrual discharge of blood, it was to be considered in how far the duration of the flow, its strength, and whole course, was the same or altered. The duration might continue the same or become shorter or longer. The average duration being 5 days, it was only $4\frac{1}{4}$ days under the use of medicines, for which reason we shall find that the greatest number of changes which were produced by medicines consisted in an abbreviation of time. This abbreviation was from 1 to seven days—viz. in 10 cases 1 day, in 4 cases 2 days, in 3 cases 3 days, in 2 cases 5 and 7 days; in one case only was the duration prolonged by 3 days. The prolongation or abbreviation not exceeding half a day is not to be taken into consideration. Thus the duration of the menstruation was unchanged in 29 cases; it was shorter than usual, or it ceased, in 19 cases; and it was longer than usual in 1 case. The strength of the menstruation was unchanged in 31 cases, diminished in 11, increased in 7: in 1 case the patient stated that the blood had been of an unusually dark colour. The course of the menstruation was regular in 49 cases, became irregular—so that the discharge of blood ceased and again returned—in 6 cases, and retained its irregular course in 5 cases.

If the variations in the flow, with regard to duration, strength, and course, be combined, we shall be able to refer all the changes to the following classes, in which the observations will be placed according to the diseases and the medicines that were administered. The numbers prefixed mark the number of the observation in the Danish original, but which are not translated.

I. The flow of blood retained its usual duration, strength, and course, in 22 cases.

| <i>Obs.</i> | <i>Disease.</i> | <i>Applied medicine.</i> |
|-------------|------------------------------|---|
| 1. | F. biliosa (convalescentia). | Decoct. Chinæ acidum. |
| 3. | F. scarlatinosa. | Balneum tepidum. |
| 6. | F. rheumatica. | Chinimum sulphur. |
| 8. | F. rheumatica. | Chinimum sulphur. |
| 13. | Gonalgia rheumatica. | Tartarus stibiat c. Hb. digitalis. |
| 15. | F. intermittens. | Chinimum sulph. cum ferro subcarbonico. |
| 16. | Angina biliosa. | Mistura acidi mineralis. |
| 17. | Bronchitis. | Vesicatorium, solutio salis ammoniaci dulcis, Pil. digestivæ, Sal. anglicum, Clysm. |
| 22. | Veneficium c. acid. nitrico. | Regimen glaciale. |
| 23. | Hæmatemesis. | Mistura acidi mineralis. |
| 27. | Chlorosis. | Ferrum subcarbonicum. |
| 28. | Chlorosis. | Mistura Griffithiana, thea ligni, quassia et fol. Sennæ. |
| 29. | Chlorosis. | Tra. ferri pomati. |
| 35. | Irritatio spinalis. | Nitras strychnini, infus. tonico-nervinum. |
| 36. | Irritatio spinalis. | Zincum valerianicum, laudanum liq. Sdh. |
| 37. | Irritatio spinalis. | Infus rad. valerianæ. |
| 38. | Anæsthesia rheum. | Liq. anti-rheumaticus. |
| 39. | Anæsthesia rheumatica. | Liq. anti-rheumat. thea flor. arnicæ et chamomillæ. |
| 42. | Hysteria. | Tra. assafoetida. |
| 48. | Hysteria. | Magisterium bismuth, c. Ext. hyosciami. |
| 49. | Hysteria (c. menostasia). | Tartarus borazatus. |
| 51. | Mania hysterica. | Tartarus stibiat. d. r. |

II. The flow of blood retained its usual duration and course, its strength only being changed, in 4 cases.

| <i>Obs.</i> | <i>Disease.</i> | <i>Applied medicine.</i> |
|-------------|------------------------------|---|
| 2. | F. biliosa (convalescentia). | Elixir aromatico-acidum. |
| 12. | Rheumatismus. | Tra. guaiaci volatilis. |
| 36. | Irritatio spinalis. | Vesicatorium, Tra. assafoetida et nucis vomicæ. |
| 43. | Hysteria. | Emulsio assafoetidæ. |

III. The flow of blood retained its usual duration and course, but its strength was diminished, in 3 cases.

| <i>Obs.</i> | <i>Disease.</i> | <i>Applied medicines.</i> |
|-------------|-----------------------------|--|
| 10. | Rheumatismus. | Balneum tepidum. |
| 30. | Chlorosis (c. rheumatismo). | Tra. ferri pomati, sal anglicum. |
| 35. | Irritatio spinalis. | Ext. stramonii, infusum tonico-nervinum. |

IV. The flow of blood retained its usual strength and course, but continued shorter than usual, in 9 cases.

Obs. Disease

7. Rheumatica.
 14. F. intermittens, c. rheumatismo.
 18. Bronchitis.
 20. Pneumonia.
 34. Irritatio spinalis.
 44. Hysteria.
 45. Hysteria.
 50. Cardialgia.
 52. Ischuria.

V. The flow of blood retained its usual course, but was of shorter duration and stronger than usual, in 2 cases.

Obs. Disease.

14. F. intermittens c. rheumatismo.
 46. Hysteria.

VI. The flow of blood retained its usual course, but was of shorter duration and weaker than usual, in 8 cases.

Obs. Disease.

5. F. rheumatica.
 5. F. rheumatica.
 9. F. biliosa-rheumatica.
 11. Rheumatismus.
 24. Hæmatemesis.
 25. Hæmatemesis.
 26. Chlorosis.
 31. Œdema faciei.

VII. The flow of blood retained its usual course, but was of longer duration and stronger than usual, in 1 case.

Obs. Disease.

32. Tuberculosis pulmonalis.

VIII. The course became irregular, so that the flow of blood discontinued and again returned, in 6 cases.

Obs. Disease.

4. F. scarlatinosa.
 13. Gonalgia rheumatica.
 19. Pneumonia.
 41. Hysteria.
 54. Eczema syphiliticum.
 55. Scabies.

IX. The usual irregular course remained unaltered in 5 cases.

Obs. Disease.

21. Congestiones capitis.
 33. Tuberculosis pulmonalis.
 40. Hysteria.
 47. Hysteria.
 53. Descensus et obliquitas uteri.

Applied medicines.

- Nitrum, Calomel c. Opii, Pulvis Doveri.
 Balneum russicum.
 Elixir pectorali.
 Tartarus stibiatus d. r., venesectio.
 Zincum valerianicum, Moschus, clysmata assafoetida.
 Elixir roborans Whytti.
 Elixir acidum Halleri.
 Calomel, gr. x., sal. anglicum.
 Tra. ferri muriatici.

Applied medicine.

- Chininum sulphuricum.
 Elixir aromatico-acidum.

Applied medicine.

- Salicin.
 Zincum valerianicum.
 Mistura camphorata, sal. anglicum.
 Balneum russicum.
 Mistura acidi mineralis, Liq. ferri muriatici.
 Vesicatorium, mistura acidi mineralis.
 Tr. ferri pomati.
 Pilulæ scillaticæ, balneum russicum

Applied medicine.

- Saccharum saturni c. opio.

Applied medicine.

- Mistura acidi mineralis.
 Ext. stramonii.
 Tartar. stibiatus d. r.
 Tra. assafoetidæ, cucurbitæ cruentæ.
 Balneum tepidum.
 Balneum tepidum.

Applied medicine.

- Elixir acidum Halleri.
 Kermes mineralis c. Ext. hyoscyami.
 Emulsio assafoetidæ.
 Thea ligni quassia et fol. sennæ.
 Liq. anodynus martiatus.

From the preceding review it may be seen that medicines have a visible influence on the menstrual discharge of blood; for while it continued unchanged in 22 cases, in 33 cases a more or less marked change in the usual duration, strength, and course of the flow took place. A part, however, of these changes are less important, with which must be reckoned those cases in which the flow of blood lasted but one day shorter than usual, which was the case 10 times. However, only 3 of these cases belong to the class in which the strength and course of the discharge of blood continued unchanged, and the duration only was altered: all the other cases were accompanied, besides, by alterations with regard to the strength and course. Nor must it be forgotten that, with regard to the statement of the strength

of the flow, we could only be guided by the undecisive opinion of the patients themselves; nevertheless, the proportion 3:2 of the changed and unchanged flow of blood which we have found out is too striking to be considered entirely accidental.

Whilst, therefore, upon the whole, the effect which the medicines produced on the flow of blood cannot be denied, there arise difficulties in explaining them, whether we take into consideration the different diseases for which the medicines were administered, or the medicines themselves. With regard to the effect of the medicines in acute and chronic diseases, we do not find any remarkable difference. For the sake merely of pointing out some of the diseases that are repeatedly mentioned, we find that the flow was—

| | |
|------------------------------------|----------------------------------|
| In rheumatism | unchanged twice; changed 3 times |
| In bronchitis and pneumonia . . | changed 1 unchanged 3 „ |
| In hæmatemesis | „ 1 „ 2 „ |
| In chlorosis | „ 3 „ 2 „ |
| In irritatio spinalis | „ 3 „ 3 „ |
| In hysteria and cardialgia | „ 3 „ 6 „ |
| In rheumatismus chronicus . . . | „ 3 „ 4 „ |

Even where the menstruation of a patient has been observed several times, there have been cases where certainly different remedies have been of variable effect at different times.

seen that different medicines, without regard to the disease for which they were exhibited, produced a perceptible but different effect upon the flow of blood. The figures mark the number of the single cases in which a medicine is used more than once.

From the following review it will be

| Medicine applied. | The flow of blood unchanged | The flow shorter, weaker, or irregular. | The flow longer and stronger. | The flow of blood shorter and stronger. |
|---|-----------------------------|---|-------------------------------|---|
| Narcotica (Opium, Stramonium, Hyoscyamus) . . | 2 | 3 | 1 | — |
| Valeriana (Inf. valer. Zincum valer. Inf. tonico nervinum) | 3 | 3 | — | — |
| Camphora (Mistura camph., Liq. antirheum) . . | 2 | 1 | — | — |
| China (Decoctum Chinæ acidum, Elixir roborans, Chininum sulphuricum, Salicin) | 4 | 2 | — | 1 |
| Ferrum (Ferrum subcarbonicum, Tra. ferri pomati, Mist. Griffith, Lq. et Tra. ferri muriatici) . . . | 3 | 4 | — | — |
| Ac. sulphuricum (Mist. acidi mineralis, Elixir acidum Halleri) | 2 | 4 | — | — |
| Elixir aromatico acidum | — | — | 1 | 1 |
| Tartarus stibiatus d. r. | 2 | 2 | — | — |
| Assafoetida | 1 | 2 | 2 | — |
| Lazantia varia | 2 | 1 | — | — |
| Vesicatorium | 1 | 1 | 1 | — |
| Cucurbitæ cruentæ venæsectio | — | 2 | — | — |
| Balneum lepidum v. russicum | 1 | 6 | — | — |

The greatest effect was produced by tepid and Russian baths, as the flow during and after the use of them was unchanged in one case only, but diminished in six. It is difficult to explain how this effect was produced, as it was rather to be supposed that the heat increased and prolonged the flow: it is possible that this effect may be ascribed to an increased liability to catch cold after the bath. In accordance with this is an observation that I have made several times in Frederick's Hospital, that women who, during menstruation, got clean sheets or linen not well aired, complained that their menses ceased to flow after it. Generally, women avoid changing linen during menstruation, and are very careful not to leave off the wearing of cloths which they generally wear, and are cautious not to catch cold; whereas I have been informed that prostitutes in this town frequently change their linen during this period, in order to shorten the duration of the menstruation. Brierre de Boismont mentions the use of similar means: also other external remedies—as, for instance, vesicatoria, venesectio, and cucurbitæ cruentæ, are of greater influence on the discharge of blood; whereas it remained unchanged in a case of poisoning, under the external and internal application of ice, cold food, and other parts of a cold regimen. Of other medicines that altered the flow of blood, and especially made it shorter, we must mention the usual astringents—viz., the preparations of iron and the sulphuric acid; the flow being unaltered in five cases, but diminished in eight, after the use of these medicines: it was likewise altered after the use of narcotics in four cases, but suffered no change in two cases. Assafoetida showed a decided influence; less effect was produced by valeriana and camphora. The more powerful laxantia, which were applied in several cases which we have not mentioned, seemed to have no considerable effect. It is remarkable that china and chininum did not more often produce a change in this secretion. With regard to the five last observations in the summary, p. 14, which are not put down in the above register, it can only be remarked that the usual irregular course remained unaltered under the application of different medicines.

Although thus the influence of medi-

cines on the discharge of blood is sufficiently evident, it is, upon the whole, difficult to explain this effect, especially as the same medicines sometimes, although but rarely, have produced quite opposite effects. This is the case with assafoetida, and, in some cases, with narcotics and vesicatoria. This is also the reason why, in the preceding remarks we have so often used the expression "change," although the effect of the medicines in most cases proved to be a diminution of the duration and strength of the flow, or a disturbance of its course. But, however this may be, the influence which the application of a medicine during menstruation produces shows itself of such a nature that the flow of blood appears as an inferior phenomenon in the menstrual function; which is still more evident when we consider that the medicines used, produced in only very few cases a scarcely important effect on the usual course of the disease, or on the patient's whole state of health. Even in these cases it always remains doubtful whether the medicine would not have acted in a similar manner even if the menses had not flowed, or if the resulting symptoms are not to be explained as those usual to the disease. Of these cases we will point out the following, stating at the same time the symptoms that accompanied the application of the medicine.

Obs. 11. Rheumatismus: the headache was more violent during menstruation under the use of Russian baths.

Obs. 13. Gonalgia rheumatica: pains in the abdomen under the use of tartarus stibiatus and flo. digitalis, which ceased during menstruation.

Obs. 19. Pneumonia: heaviness in the head, giddiness, ringing in the ears, under the use of tartarus stibiatus d. r.

Obs. 24. Hæmatemesis: after the application of Mistura acida mineralis and Liquor ferri muriatici, the menstruation decreased, lasted shorter, and did not recur the two following periods.

Obs. 26. Chlorosis: some pains in the abdomen after the cessation of the flow; the patient used Tra. ferri pomati.

Obs. 50. Cardialgia: on account of the patients having no action of the bowels, different laxantia were applied, after which the menstruation ceased, and the patient complained afterwards of pains in the head and over the loins, the cardialgia at the same time continuing.

Obs. 54. Eczema syphiliticum: under

the use of tepid baths, during which the course of the menstruation became irregular, the patient complained of giddiness, weakness, and bilious attacks. On examining the symptoms that accompanied the application of the medicine during menstruation, a well-founded doubt arises whether the symptoms in these severe cases are owing to the period at which the medicine was applied. In all the remaining cases no effect was produced on the course of the disease, or on the general state of health of the patient.

We may here with propriety add some remarks on the reciprocal relation in which menstruation and disease, upon the whole, stand towards each other. We find diseases, acute and chronic, on which the menstruation, whether it appears for the first time or during the disease, produces no effect. Instances of the contrary are equally frequently found, and it is natural that more attention should be paid to such cases, in which, on the return of the flow, the morbid symptoms are alleviated or removed. The question now is, whether this alleviation is owing to the periodicity of the loosening of the ovum from the ovarium, or to the local loss of blood. When a patient, for instance, suffers from an acute or chronic affection of the abdomen, especially of the genitalia, the attacks may often be removed at or after the return of menstruation; but when, for instance, the patient has suffered from a violent headache, which is relieved by the menstruation, it is not impossible that a bleeding of the nose would have produced the same effect. We are left in the same uncertainty when menstruation ceases at the same time that a disease arises. A cold may produce a cessation of the menstruation, but the same cause may produce a pneumonia. Under such circumstances, it must be difficult to decide whether the same cause has produced both phenomena, or if the retention of an accustomed evacuation of blood has affected the lungs. The same is the case with nervous and congestive symptoms after amenorrhœa, and with the occasionally occurring instances of mania and phthisis ascribed to the cessation of menstruation. Is it here the checked periodicity, or the cessation of the discharge, that is the cause? Would not the same symptoms have appeared on

the cessation of any other accustomed flow of blood—for example, hæmorrhoids? not to mention that the patient may recover from several of these symptoms without the return of the catamenia. No less uncertain is our knowledge of those cases where another flow of blood supplants the menstrual discharge. A patient having been bled during menstruation or shortly before it, or the occurrence of a profuse hæmatemesis (instances of which we have mentioned), may stop or diminish the discharge of blood from the uterus; but nothing implies that the function of the ovaria at the same time suffers, and it is not probable that the periodicity should hold the same inferior place in the menstrual function as the menstrual discharge of blood.

With regard to the influence of diseases on the menstruation, it is very similar to the effect that medicines produce on it. While we found a number of medicines that produced no influence on menstruation, we found others that affected it in a smaller or greater degree; and we know for certain that there are medicines that produce a specific effect on the parts of generation: for instance, *secale* and *sabina*. That they affect the uterus is certain; but it is yet uncertain whether they also affect the ovaria, and especially whether they exert any influence on their periodicity. In a similar manner we daily find that both acute and chronic diseases occur, under which menstruation pursues its regular course; even diseases of the uterus ("Hysteria," in the narrower and wider sense of the word) are frequently without any influence at all on menstruation. On the other hand, there are diseases that affect menstruation in a remarkable degree. Brierre de Boismont, with regard to this, mentions various epidemic conditions, the influence of which on the menstrual discharge of blood was evident. However, it is difficult here to decide whether the cause of the disease, or the disease itself, produced the disturbance of menstruation. Amongst the diseases that especially affect menstruation we must mention diseases of the abdomen; fevers, especially typhus fevers; further, a long state of convalescence after serious illnesses; several chronic affections, for instance those of the heart or of the sexual organs: Brierre de Boismont mentions phthisis

in 47 patients whose menstruation was disturbed it had disappeared altogether in 34 cases. Louis also mentions this influence of phthisis on menstruation. With regard to the decision of the question in chronic affections, it very much depends on the time when the amenorrhœa appeared: this generally happens at the more advanced stage of the disease. Nevertheless, even in these cases we remain uncertain whether the disturbance of menstruation, occasioned by the disease, is confined to the menstrual discharge, or extends farther and reaches to the ovary, and has any influence on the periodical loosening of the ovum. It is, for instance, not altogether proved that phthisical women are, upon the whole, less fertile than others; it would be fortunate if it were the case.

We have thus seen that the menstrual discharge shows a certain independence of medicine and diseases, but that this independence is only to be considered idiopathic, apparently of no other nature than that which medicines and diseases, upon the whole, produce on other discharges of the blood, and that, therefore, in general, the effect does not appear to extend farther, or to reach the periodical function of the ovary. For this reason we are also from this point of view entitled to consider the menstrual discharge of blood as an inferior phenomenon of the menstrual function, which, added to the other signs, merely permits us to conclude that puberty has commenced, and the continuance of which is the most decisive but not the exclusive sign of apparent fertility in woman.

Before we conclude, we may give some merely practical remarks upon the employment of medicines during menstruation. It is our opinion, that there is nothing that can hinder the employment of any medicine whatever under menstruation, even if the consequence be a disturbance of the course of the discharge of the blood. The only remedies which perhaps ought to be excepted are baths, to the use of which also decorum is an objection. Undoubtedly we shall here have to struggle with an inveterate prejudice, which, although completely innocent, ought not either to prevent us, if required by circumstances, from administering the most powerful medicines during menstruation. It is singular that medical men

should have paid so little attention to this subject; perhaps because women in general are afraid of using medicines during menstruation, although their complaints, that the menstruation ceases after the use of medicines, is scarcely ever well-founded. I can here produce the authority of a man whose opinion is founded on great experience. Professor Christensen, of the "Almindelig Hospital," employs injections of a decoction of oak-bark and alum by the vagina by means of a common syringe three or four times a day in inflammations of the mucous membrane that lines the female parts of generation, whether menstruation be present or not. He has not seen one single ill effect arise from the injection during menstruation, although it once in the way may have produced a slight irritation in the inferior part of the abdomen; but this happens also after the application of the speculum. Brierre de Boismont says, that he has seen amenorrhœa after the use of copaiva and cubebs, after repeated bleedings, and after the application of leeches to the epigastrium.

It is another question, what our prognosis is to be, or how we are to manage cases of amenorrhœa. So long as in certain cases we cannot decide whether the symptoms accompanying these diseases be owing to the absence of the discharge of blood, or to a disturbance of the periodicity, there can be no question of a rational cure, because the symptoms are far from peculiar, but are common to many other diseases. Where the symptoms indicate a wanting flow of blood, there is greater chance of our cure proving successful than where they are of a so-called nervous nature, or where the cause of the suffering is to be looked for exclusively in the disturbance of periodicity. Hence arises our want of plans, when the emmenagogue remedies are exhausted, and hence also the great difficulty of predicting with any certainty the recovery from this disease. It therefore also often happens that the symptoms from which a patient has suffered for some time are removed after the use of one medicine or another, which has been applied just at the time when the return of the periodical function of the ovary was at hand, without our being entitled to ascribe the successful event to the medicine, since in many cases it has not been accompanied by the

flow of blood. And in those cases, where the symptoms vanish at the appearance of the flow, we must make a distinction between such cases, in which the discharge alone has been the restoring moment, and those in which the periodicity has returned, the flow of blood being only an inferior symptom of it. Prof. Christensen mentions his having several times seen the menstruation return after one single application of lapis infernalis through the orifice of the uterus, after its having been absent for a long time, even for a year, and that this has had good effect on ulcerations of the mucous membrane of the sexual organs. But he adds, that the lapis infernalis, when too often used, produces a more frequent return, and a longer duration of menstruation, so that the patient is only free from it for about eight days, which is to be taken into serious consideration, because it both weakens the patient, and has a bad influence on the ulcerations. Here the secretion of blood was evidently a merely local discharge from the womb, without being at the same time a sign of the detachment of an ovum. It is with the cure of disorders of menstruation as with the application of anthelmintic medicines; if we were better acquainted with the natural history of intestinal worms, and especially the time and condition of their probable periodical departure from the intestinal canal, we should be able with certainty to follow up a rational cure, and with greater success to calculate upon their removal. We are, however, under our present imperfect knowledge, obliged either to take refuge in purely empirical means, applying now one, now another, or to be satisfied with the application of such means as only alleviate the apparent symptoms, without giving any positive proof that the disease is at the same time radically cured.

ROYAL MEDICAL SOCIETY OF EDINBURGH.

At a meeting held in their hall on Friday, 28th November, the following gentlemen were elected presidents for the ensuing year, being the 115th session of the Society:—Thomas Spencer Cobbold, M.D.-Ed., Ipswich; William H. Broadbent, Cheshire; William Murray Dobie, M.D.-Ed. Chester; James McGrigor, MacLagan, M.D.-Ed., Edinburgh.

MEDICAL GAZETTE.

FRIDAY, DECEMBER 5, 1851.

Our subscribers and contributors will perceive by a notice inserted in our advertisement pages, that a change is about to be made in the publication of this Journal. We take this opportunity of announcing that the papers already in type, and those which have been promised and accepted by us, are sufficient to fill the whole of the available space in the four numbers of the MEDICAL GAZETTE which yet remain for publication. These will of course have the priority of selection.

In selecting these papers for insertion, we must be guided by the contents of each number,—as Reports of Societies, Hospital Reports, and Notices of Books, must necessarily have their usual space assigned to them. Should any paper appear to the author to be unduly delayed in publication, we trust that the delay will be ascribed to the true motive, namely, the necessity of now closely adjusting our matter to our space.

WE recently directed the attention of our readers to the high ratio of sickness and mental disease that has prevailed in the Pentonville Prison during the past year. We now add a few remarks to what was then said, in endeavouring to trace those results to their true causes.

Dr. REES, in his report to the Directors of the Prison, directs attention to suggestions emanating from himself on previous occasions, and which he very justly considers would, had they been regarded with the attention which (in our opinion) they merited, have gone far to restore the prison to its former state as regards the mental and physical health of the prisoners.

The attention of the Directors was called by Dr. Rees in 1849, to the prevalence of a general irritability of mind existing among the prisoners, which had been the cause of considerable anxiety to him. This caution, however, was utterly disregarded and overlooked—we can scarcely suppose otherwise than intentionally. Upon this subject Dr. Rees now remarks:—

“The fatal effects of neglecting this indication it is now my painful duty to report; and I have to deplore that my opinion, then expressed, failed to make the Directors partake in my anxiety.”

A greater number of prisoners having passed through the prison during the past than the previous year, ought to have exercised a beneficial effect upon the health of the prison, if shortening the period of confinement could have had the effect of diminishing the supposed dangers of separation.

Such, however, it has been seen, is not the case. The increase of insanity, and of general illness, has been obviously the result of some other cause than the mode of punishment by separation. The fact is one that affects the interests of society as well as of the Directors of this Prison; and it has attracted the attention of those who are well qualified to judge of the whole bearings of the question. We find that Sir Benjamin Brodie and Dr. Ferguson have instituted a personal examination into the condition of the prisoners during the past year. The results of their inquiries are embodied in a joint report, which fully bears us out in the reflections we have offered, and from which we quote the following passages, in confirmation of our remarks:—

“In the year 1849, according to the printed report, there were four cases of insanity; and we understand that, in the year 1850, five cases of insanity were reported; in addition to which, we saw two of the convicts, one of whom certainly was insane, while the other, as

it was reported to us, had been, and still was, in a state of dangerous mental excitement. It would appear, therefore, that in the last two years, during which the term of imprisonment has been shortened, and a considerable number of convicts have been placed in association, the actual number of cases of insanity has been fully equal to that which occurred during the whole of the six preceding years before the system was altered. There has been a corresponding increase in the number of cases of these slighter forms of mental aberration, which are referred to in the Reports under the head of Delusion. Of these, we understand that as many as thirteen have been reported during the last two years, being only two less than the whole number which occurred during the six years in which we acted as Commissioners. These facts are the more remarkable, as it was very much on the supposition that the tendency of the former system was to produce insanity that the changes above mentioned were introduced.”

In order to point out distinctly the changes to which allusion is here made, it may be stated that, according to the Report, a great difference has taken place, relatively to preceding years, in the class of prisoners admitted; in the abbreviation of the period of detention, averaging only eleven months, including any periods previously passed in separation in other prisons; in the carrying out of the discipline, a large proportion having been engaged in association in the pursuit of various trades or domestic employments; in the diminution of the moral and educational elements of the original system; and in the abandonment of direct medical superintendence. All these changes are surely sufficient to account for the unfortunate results already described.

In a penal establishment, under a system the very existence of which has been staked upon its influence on the mental and physical health, it might have been supposed that a too vigilant medical superintendence had been impossible; but the Directors appear to be guided,

in their management of this great establishment, by no principle but the rule of perverseness. We find them admitting all the deteriorating circumstances above stated;—confessing that the inmates consist of more hardened criminals (“both morally and physically inferior to their predecessors”);—no longer selected with strict reference to the state of their bodily or mental health;—at the same time we find them stating that the probation of separate imprisonment has had a beneficial effect even upon these: yet, in the face of these facts, of which they themselves are, or ought to be, cognizant, they have recklessly relaxed and damaged that system of discipline which, upon their own showing, was the best calculated to effect moral and physical improvement.

Need we look further for the causes of the supposed failure of the SEPARATE SYSTEM? Could any plea be virtually more plainly inculpatory than the withdrawal of restrictions and appliances in favour of a worse class of convicts, which, if such a comparison be allowed, were found so signally useful for the better class. Is it not evident that the worst cases of any malady, mental or physical, require the most diligent and cautious treatment?

We again affirm that no good reason has yet been given for the relinquishment of the “great experiment” of the separate system, which has been virtually subverted by the present Directors of the Prison; not even a plausible excuse remains, after the facts are sifted, for depriving physiological and psychical science of the proofs of such a trial, and for withholding from society of the most certain means of the reformation of the criminal population.

It has been our object, in the preceding remarks, to avoid all extra-professional topics; but we may observe, in conclusion, that, judging from the

extreme ignorance and mismanagement now manifested on medical points, we cannot form a very favourable opinion of the capacity of the Directors to deal with the not less important moral bearings of this subject.

Having thus demonstrated the fact of an increase in the number of cases of mental and bodily disease, in Pentonville Prison, during the past year, and having traced this result to mismanagement on the part of its Directors, there remains but one plain conclusion, and that is, the proved incapacity of these individuals for the performance of such important duties as are necessarily involved in their position.

Reviews.

The Prevention and Cure of many Chronic Diseases by Movements. By M. ROTH, M.D. 8vo. pp. 302. London: Churchill. 1851.

WE have, on a previous occasion,* given an account of the principles and practice of Kinesipathy, or, as we then designated this new form of quackery, from its originator, LINGISM. Our observations were then founded upon the statements of a pamphlet by Augustus Georgii, a pupil of Ling; and we find no reason, from anything contained in this more imposing production of Dr. Roth, to induce us to modify or retract the unfavourable estimate then formed of this new mode of treating disease.

Dr. Roth enters, with a great appearance of philosophical accuracy, into an exposition of the *scientific principles* (?) of the “system.” The following may serve as a specimen of the author’s physiological reasoning:—

“The subject of this doctrine is the human organism, considered by Ling as a whole, and existing for itself, consisting of life, vital power, and substance; the vital phenomena of which are subordinate, as well to physiological as to physical laws in general, and are only *ideally* arranged (that we may better understand them), in three

principal orders, known as the *Dynamical*, *Chemical*, and *Mechanical* agents.

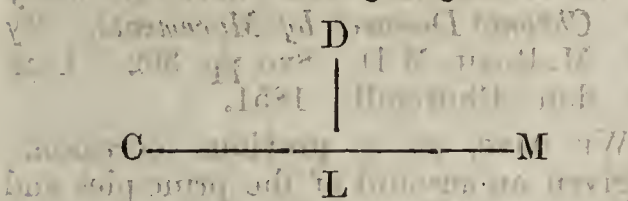
To *dynamical* phenomena belong the manifestations of the moral and intellectual powers of the mind, sensibility, &c., whose immediate material organs are the cerebral, spinal, and ganglionic systems, and by the vital activity of which these phenomena are manifested.

To the *chemical* belong generation, nutrition, reproduction, sanguification, nutrition, &c., produced by the vital activity of the different glands and glandular organs, the lymphatics and bloodvessels, &c.

To the *mechanical* belong the spontaneous as well as the organic movements: as for instance, breathing, circulation, walking, &c., produced by the vital activity of the lungs, muscles, &c." (p. 25.)

This theoretical physiology is not a little obscure in making the vital subordinate to the physical phenomena, while it describes the latter as being produced by the former.

The pathology resulting from this physiology is somewhat fancifully represented in the following diagram:—



D. is the dynamical; C. the chemical; and, M. the mechanical agent. L. is life, "in its highest development, and the first point from which the three principal agents begin." The maintenance of these relations is the health of the organism, while if C. or M. be higher or lower, derangement of the health follows.

We shall not further follow Dr. Roth in his speculations under this head.

We find the following enumeration of the effects of *active* movements:—acceleration of functions, increase of nervous influence, activity of the senses, increased innervation of the muscles, augmentation of the receptibility of sensitives, stimulation of the circulation, development of fibrous textures, increased power of the heart and force of respiration, augmented temperature, increase of secretion, &c., &c.

The effects of *passive* movement are stated to be somewhat similar, although acting rather on the whole body than on parts. But local and special passive movements are also described.

The following is curious, if not altogether new:—

Sneezing.—The concussion of the respiratory organs produced by sneezing, had been employed for a long time as a curative means, and is even believed to be a salutary symptom, at least by the people, which gave rise to the origin of the expression *God bless you*, which is very old, and mentioned (!) by Xenophon."

This is the first time we have heard that Xenophon was an authority on the etymology of "God bless you."

The indications for *active* movements are to form new muscular fibre, to remove fat, to effect innervation, to increase temperature, to promote arterialization, to derive blood, to relieve the contraction of muscles, tendons, &c.

The indications of *passive* movements, are hypertrophy of organs, pseudo-formations, products of inflammation, dilatation of veins, disorder of the valves of the heart, contraction of muscles and tendons.

We have done more than sufficient justice to this work in the space which we have now devoted to it; but we must not omit to mention some few of the diseases in which Lingism has been found so *eminently successful*, that its advantages over medical treatment cannot be doubted, i.e. by its advocates.

Ophthalmia, *chronic laryngitis*! spasmodic contractions of the pharynx, *asthma*! *consumption*! *acute œdema of the lungs*! diseases of the heart! diseases of the stomach, *gastritis*! diseases of the liver, spleen, gall bladder, &c., *epilepsy*! neuralgia, *paralysis*! *itch*! *dropsy*, scurvy, *gonorrhœa*, *mental disease*! &c., &c., &c.

The most prominent feature of Dr. Roth's work consists in the numerous woodcuts of patients in all sorts of impossible and impracticable attitudes, which if they have not instructed have most assuredly afforded us unmeasured amusement,—certainly in some sense proving the doctrine inculcated, by the benefit conferred on both *morale* and *physique* by the muscular movements in laughter.

Wiesbaden—its Hot-Springs; their Efficacy and Application. By FRANCIS GERGENS, M.D. Translated from the German. Small 8vo., pp. 92 Wiesbaden. 1851.

THIS is a pleasantly written little work, which well describes all the attractions,

classical, historical, and natural, with which Wiesbaden and its vicinity abounds.

In the table which gives the analysis of the Kochbrunnen water, not less than twenty-one ingredients are enumerated as the constituents of that spring. Chloride of sodium is in greatest proportion; with this are associated chlorides of other metallic bases, carbonates of the alkalies and of iron, bromide and iodide of magnesium, sulphate of lime, phosphate of lime, silica, arseniate of lime, silicate of alumina, and traces of organic matters. Besides these solid constituents which bear the proportion of about 62 grains in a pound, or 7680 grains, carbonic acid and nitrogen are also present to the amount of about ten cubic inches. On this analysis the author very justly remarks:—

“Whether all the detected substances are to be found in the combination here given, in water which has suffered no evaporation, or whether, as Kastner thinks, instead of the coexistence of sulphate of lime and chloride of sodium such as is found after evaporation, chloride of calcium is in the water itself, and sulphuric acid in combination with soda. This is a question of some medical importance, although not to be answered with any great precision” (p. 23).

The following is the author's description of the physical characters of this water:—

“The water itself appears in a glass not quite so transparent and colourless as ordinary spring water. Its smell is extremely faint; some compare it to the vapour arising from freshly slaked lime, others to eggs fresh opened, but certainly by no means putrid, and this smell is only perceptible when a person stands close to the spring. Its taste resembles highly salted weak broth. Numerous air bubbles which ascend from the bottom give the water the appearance of being in a boiling state. In the basin of Kochbrunnen, and in the gutters which carry off the water, especially in these last named, where the water comes in contact with the air, is found a considerable mass of earthy deposit, of a brownish red-yellow colour, soft, and apt to stain. This is also found in the wooden baths, and a tolerably thick film is also formed over the surface of the water, which is caused by atmospheric air dislodging the carbonic acid of the water.”

This deposit consists principally of carbonate of lime with oxide of iron.

The temperature of the Kochbrunnen spring is 156° F.; other springs at Wiesbaden vary from this temperature to 118° F.

Dr. Gergens gives an ample account of the uses of these springs, with the directions to be observed in their employment. The chief forms of disease on which the author states that these springs have acquired a reputation are gout, abdominal congestions, and rheumatism, a due observance of regimen and exercise being conjoined. Dr. Gergens enumerates many other diseases in which these springs are found of service,—*e. g.* uterine derangements, syphilis, ulcers, struma; in short, the usual list of chronic diseases, which are benefited by a residence in a genial climate, amid romantic scenery, with all the charms of classical and historical associations to aid the potent influence of change of scene and occupation, and rest from the toils and cares of business.

This work is written in a scientific spirit, and is free from the objections that so frequently reduce works of this character to the level of inferior guide-books. Dr. Gergens' account of the Wiesbaden springs may be consulted with advantage by the professional adviser, and may be perused by the general reader as a very agreeable supplement to the “Bubbles from the Brunnens of Nassau,” so well known and universally admired.

The Pocket Formulary and Synopsis of the British and Foreign Pharmacopœias, &c. By HENRY BEASLEY. 5th edition. 12mo. pp. 546. London: Churchill. 1851.

WE have already had occasion to speak favourably of former editions of this useful little Pocket Formulary, which may be considered a multum in parvo to prescriber and dispenser. The republication of the London and Dublin Pharmacopœias has rendered many alterations necessary; and so far as our examination has extended, the author has taken especial care to keep his volume up to the present level of pharmaceutical science and practice.

There are some useful appendices to the Formulary on the strength of medicines, abbreviations, English and French synonymes, &c.

Guy's Hospital Reports. Second Series. Vol. VII. Part ii. 8vo. pp. 266 to 460. London: Churchill. 1851.

THE contents of this part of a journal which we have so frequently had the gratification to commend very favourably to the notice of our readers are as follows:—

1. On a Certain Affection of the Skin—Viligoidea; with remarks by Thomas Addison, M.D., and William Gull, M.D. 2. Cases of Fracture of the Cervix Femoris, by J. B. Hodgson. 3. Cases in Surgery, by John Birkett. 4. Select Surgical Cases, by Alfred Poland. 5. Observations on the Treatment of Anasarca or General Dropsy by Puncturing the Legs, by John Hilton, F.R.S. 6. Remarks on Death from Strangulation, by Alfred S. Taylor, M.D., F.R.S. 7. Two Cases of Pregnancy with Cancer of the Cervix, in one of which the Cæsarean Section was successfully performed, by Dr. Oldham. 8. Ophthalmic Cases, by John F. France. 9. An Account of some Cases of Lithotomy performed in India by Mr. Coles.

All these papers possess great practical interest, and will be found to convey much valuable information. Coloured, and uncoloured, lithographic prints illustrate many of the cases.

If we might point to those which have specially attracted our attention, we should name Mr. Hilton's paper and Dr. Oldham's cases.

We must repeat for this last part the same strong eulogium that we had to express for former parts of this most useful publication.

A Manual of Physiology, including Physiological Anatomy. By WM. B. CARPENTER, M.D., F.R.S., &c., &c. Second Edition. Small 8vo. pp. 613. London: Churchill. 1851.

THIS work, which forms one of Mr. Churchill's well-known "Manuals," has speedily gone through its first edition. It is, therefore, unnecessary, as the class of readers for whom it was intended have thus given proof of its utility, that we should do more than announce the appearance of a second edition in no way inferior to the first, and containing the latest additions to physiological science, so far as the limits of a work of this character permit.

We can strongly recommend this volume to the student,—with the caution, however, that it should not be consulted

to the exclusion of more extensive treatises and monographs on the subjects of physiological science.

Thoughts for the Medical Student: an Introductory Address, delivered at King's College, London, October 1, 1851. By WILLIAM BOWMAN, F.R.S., F.R.C.S., &c., &c. Pamphl. 8vo. pp. 32. London: Parker. 1851.

ALTHOUGH actually delivered to the students of King's College, this admirable lecture is virtually addressed to all students of all medical schools throughout the world. We have not met with one introductory address containing more valuable suggestions for the guidance of the student; none, with more earnest inculcation of the highest principles as the basis of rules of conduct; none, in which activity and industry in the performance of duty are more impressively enjoined; none, in which the true end and real importance of medical studies are more clearly and forcibly laid down. We may add that the advice here so eloquently offered to others, is not the mere rhetorical expression of a theoretical notion of what the medical man ought to be, but it is the real echo of the author's own feelings and habits: our profession has no member who more closely approaches the standard of character to which all, we trust, aspire, than does the author of this address. On all these grounds, then, we would desire that every student of medicine should at the outset of his course of study carefully and seriously peruse Mr. Bowman's address—we are persuaded that all would be benefitted thereby.

Bradshaw's Companion to the Continent; a descriptive Hand-book to the chief places of resort. By EDWIN LEE, &c., &c. Small 8vo., pp. 408. London: Bradshaw. 1851.

THIS work, the author informs us, may be regarded as a greatly improved edition of the "Continental Traveller's and Invalid's Hand-book," which appeared three years ago. In it the author has omitted all allusions to political topics, which were objected to in the former work, and has added further observations upon the influence of climate, and has given additional tables of comparative temperature. Some judicious remarks upon the predisposing causes of disease in the upper classes of society are given in the appendix.

We have no doubt that the Companion will be found very useful, as it is greatly superior to the ordinary run of hand-books and local guides.

Proceedings of Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

MR. HODGSON, THE PRESIDENT, IN THE CHAIR.

Nov. 11, 1831.

Statistical Report upon Cases of Diseases of the Heart, occurring in St. George's Hospital, especially in relation to Rheumatism and Albuminuria. By Dr. BARCLAY.

THE author first mentioned eight cases of acute rheumatism fatal during the rheumatic attack, among which he particularly called attention to a case of very severe pericarditis, in which no friction-sound was ever heard; and to a case in which no inflammation existed either in the heart or pericardium, in which a systolic murmur was distinctly heard. He next referred to sixteen cases of recent pericarditis, and four in which it was not quite recent, occurring independent of acute rheumatism; two of which were traced to recent peritonitis, and one to recent pleurisy; a large proportion of the remainder were associated with albuminuria; but it seemed to him that, in many of these instances, tumultuous action of the heart during life had very much to do with the traces of pericarditis found after death. He detailed one case in which this action of the heart seemed to be its only cause. Eleven cases were then mentioned in which recent lymph was found on the valves, and two in which it was not quite recent. Two were traced to malformation, and two to diseases of the kidney; seven were accompanied by old disease. In six of these, the old disease was probably due to bygone attacks of rheumatism; and he remarked it as a curious fact, that this condition was so much more frequently than any other associated with recent inflammatory action. Twenty-six cases of old pericarditis were then considered, including six of adherent pericardium, and three in which the adhesions were nearly universal; besides a great many not mentioned, in which white spots were found. He believed these cases indicated that universal adhesion is not the common result of rheumatic pericarditis; and, considering the age of the patient at

death, and the condition of the heart, that it is not the most favourable termination of the attack. More than half the cases which had at some period or other suffered from acute rheumatism indicated old pericarditis. Twenty cases of old valvular lesion were probably caused by acute rheumatism; twenty-six occurred in persons who had never suffered from rheumatism at all; sixteen were regarded as doubtful cases. Among the rheumatic cases there is a great preponderance of simultaneous lesion of aortic and mitral valves; next of the mitral alone, and scarcely any of the aortic alone. It seemed probable, in most of these cases, that, during the first attack of rheumatism, the mitral valves alone were inflamed, and at some future period also the aortic secondarily. Valvular lesion was found associated in twenty-two instances with diseased kidney and albuminous urine; in twenty-six instances the kidney was healthy; and in thirteen, the evidences of disease were more or less obscure. The tricuspid valves were also affected in ten cases, and the pulmonic once. It was stated that, among these cases, disease of the aortic valves was most frequently found associated with hypertrophy, and, in aortic regurgitation, also with dilatation; disease of the mitral valves mostly with dilatation; adhesions of the pericardium more generally with dilatation; atheroma of the aorta and disease of the kidney were found accompanying a large majority of the cases of simple hypertrophy. In 141 cases of diseased kidney taken indiscriminately, hypertrophy occurred 55 times, and dilatation 36 times, together or separately in 63 individuals, and in 78 the heart was healthy. The author then detailed his observations in regard to rheumatism, made upon cases in the hospital which did not prove fatal. He found the heart diseased in 44 per cent. of acute cases, in 11 per cent. of subacute, and 4 per cent. of chronic cases. In all the chronic cases, and many of the subacute, the individual had experienced a more severe attack of rheumatism at some former period; some of the acute cases were also examples of a second or subsequent attack. Taking those cases only which were admitted with a first attack of acute rheumatism, he found cardiac inflammation occur more frequently in females than in males, and in the largest proportion between ten and fifteen years of age, after which it gradually declined to forty. The majority of the acute cases are found under twenty-five years of age, and after that there is a much larger proportion of subacute cases. There was a larger proportion of males than females admitted with confirmed disease of the heart; but the difference is less striking if those o

rheumatic origin alone be considered. At the earlier ages almost all cases of confirmed disease of the heart owed their origin to acute rheumatism; while, at more advanced ages, it almost ceased to be found among the causes.

The paper was accompanied by a table, exhibiting the principal lesions found, on post-mortem examination, in the cases on which the report was based.

After the reading of the paper,

Dr. MAYO said that the subject was one which commanded the most profound consideration from the meeting, and he felt assured that it was not owing to its great importance not being felt that none of the members, immediately on the conclusion of the paper, had addressed the Society.

Dr. C. J. B. WILLIAMS perfectly coincided with the opinions expressed by Dr. Mayo as to the great interest and importance of this subject; but in some of the observations he (Dr. Williams) thought there was a vacancy to be filled up, both for the sake of diagnosis and pathology. He next observed the connection between albuminuria and hypertrophy, and said that albumen in the urine and hypertrophy may occur without any valvular lesion; the same remedies which restored the action of the kidney reducing the symptoms of hypertrophy, and lessening the physical signs. He (Dr. Williams) had seen twenty such cases, in which there was a strong increased heaving impulse of the heart; a muffled, systolic sound; a jerking, over-full pulse; and, in another variety of early hypertrophy, a reduplication of the fast sound; the action of the ventricles, Dr. Williams considered, not being synchronous. By treatment, he said, which restored the healthy quality of the urine, the heart's action abated, and the hypertrophy diminished, showing that this sort of hypertrophy was secondary in kidney disease. He further observed, that the blood, when loaded with excrementitious matter, produces an unnatural stimulation in the heart, similar to what we see in a common muscle under excitement, and so, like it, diminishes when the cause which induced it was removed. Another point which, in Dr. Williams's opinion, deserved notice, was the presence of endocardial murmur without endocarditis being present; and said, it was most unphilosophical to suppose that the murmur could exist without a physical cause: he said, endocardial murmur occurs at an early period of rheumatism, and thought a temporary rheumatic inflammation deranges the passage of the blood, and so may produce it. Diseases of the kidneys also derange the valves, without leaving discoverable traces of disease behind; and

even in some cases of rheumatism little or no trace of disease is often found in the joints.

Dr. MAYO thought that the author's paper stated that there was often an endocardial murmur without an endocardial cause.

Dr. BARCLAY referred to the existence of endocardial murmur in cases of anæmia without any deposit in the heart; and in the cases mentioned in his (Dr. Barclay's) paper he had observed it increasing from day to day for three or four days, and even forty-eight hours before death, without any discoverable post-mortem appearances, and the conclusion that he would arrive at as to its cause was, that it was dependent on an altered condition of the blood itself.

The PRESIDENT asked at what stage of rheumatism this cardiac sound most frequently occurred.

Dr. BARCLAY replied, that he had no record which would enable him to point out the exact time.

Dr. C. J. B. WILLIAMS, again rising, said he had seen cases in which the cardiac disease occurred primarily. Whilst on his legs, he wished to make a few remarks on the cause of the endocardial murmur, which he did not think Dr. Barclay had sufficiently accounted for by supposing it depended on an altered condition of the blood. Dr. Williams ascribed it to the disease attacking the tendons of the mitral valve, increasing muscular irritability and contractility, which will become irregular and partially spasmodic, producing regurgitations. If, he says, it attacks the aortic orifice, it, by increasing the tonic contractility, may cause a murmur which would leave no trace behind. Dr. Williams thought it did not require the influence of altered blood to produce the sound: if it were similar to the sound induced by anæmia, it should not only be heard in the heart, but in the arteries and veins. The cause of the venous murmur was, he said, lucidly explained by his friend Dr. Ward; whereas in those cases there was no evidence of murmur being produced above the heart.

Dr. WEBSTER wished to say a few words on the greater frequency of the disease amongst women, and appeared to think it was from the female dress exposing the neck and chest to cold. One point Dr. Webster thought was not spoken of—the period of life at which the disease most frequently occurred. From his own experience, he said, the disease attacked most frequently those of the middle period of life; and from the Registrar's return of the past year, of 1600 who had died of cardiac disease, two-thirds were at the middle period of life.

Dr. FULLER wished to offer a remark on one point which appeared to him somewhat novel, which was—that adhesion was not the most favourable result, and that universally adherent pericardium was very rare. Almost all Dr. Barelay's cases appear, he said, to have been connected with albuminous urine, and should, he supposed, be considered as an extension of a cachectic state of the system. Dr. Fuller, in conclusion, said, he believed that no other termination of the disease but one by adhesion coincided with general experience, nor could he consider any other more favourable, which opinion also appeared to agree with the statements of Dr. Latham.

Dr. BLACK said he had heard the question asked, as to whether that disease occurred primarily or not. Although, he said, this was very rare, nevertheless it did sometimes occur, and he had witnessed an excellent example of this in one of the Parisian Hospitals. With respect to the question which arose with reference to the unnatural endocardial murmur, he (Dr. Black) considered Dr. Williams's explanation as purely hypothetical, and, as far as he could judge, unphilosophical. Dr. Black believed that the heart must act wholly or not at all; for if it acted irregularly, rupture must take place. When he considered, he said, the hydrostatic pressure which this organ has to overcome if irregularity of contraction took place, it must of necessity rupture.

Dr. BARCLAY, in reply to Dr. Webster's observations, said, he thought females were more exposed to exciting causes, and more frequently suffered from relapse. In answer to Dr. Fuller, he could only say, such facts as he (Dr. Barclay) had stated in his paper were the result of his experience, and he must confess he was surprised at it; for, from Dr. Latham's little book, he was led to expect a different result.

The PRESIDENT announced that the next meeting of the Society would take place on Tuesday, Nov. 25th, when Dr. Robt. Lee's paper on Ovarian Tumours would be read, together with such others as the time of the meeting would permit.

HARVEIAN SOCIETY.

Dr. JAMES BIRD read a paper

On the Pathological Modifications and Treatment of Croup;

the main object of the author being to point out the important differences of practice demanded in such gradations of pathological condition. The *morphological* cha-

racter of the disease, or the result of morbid action, should influence us less in determining the particular mode of treatment to be followed, than a consideration of its *pathogenic* origin. The membranous exudation, which characterises the latter stages of croup, may, though rarely, be a consequence of true inflammatory hyperæmia, but is more frequently associated with asthenic congestion, a predominance of spasmodic symptoms, and a secretion of unorganisable fibrinous membrane from the mucous cryptæ, which are found dilated, and in an ecchymosed or pale condition, very different from that of true sthenic fibrinous inflammation. Dr. Bird considers that this state of diphtheritic exudation, which is so common among the inhabitants of towns, and those occupying low, damp, malarious localities, is of low vitality and unorganizable, existing in conjunction with much irritability and spasmodic action of the muscles of larynx, and transverse membranous fibres of the trachea, by which the air-passages are momentarily contracted or closed. The exuded membrane resembles in such cases that sometimes met with in diphtheritic dysentery, and is detached by exactly the same process, a return of the natural mucous secretion of the part, which separates it from the original structure, and prepares it for excretion. These morbid results are viewed as dependent on particular climatic influences, which should be always taken into account before determining any particular line of treatment. The antiphlogistic measures necessary for subduing true inflammatory croup, and which might be found salutary in a dry, cold climate, would be utterly destructive of the patient in an opposite state of disease, or in a damp malarious locality. Such are the important general principles on which Dr. Bird would regulate the treatment; and, in order that this may be conducted with precision and discernment, the disease is divided into three stages:—1st. The catarrhal stage; 2nd. The spasmodic stage; and 3rd. The stage of exudation,—all of which are minutely described. A careful diagnosis is made between the second stage of croup, or *laryngitis stridula*, and that purely spasmodic disease, the thymic asthma of German pathologists, commonly called *laryngismus stridulus*. In order further to guide the judgment in treating this disease, its several complications of bronchitis, gastric affections, and cerebral irritation, reflected on the larynx by branches of the pneumogastric, the recurrent laryngeal nerves, are particularly pointed out. The indications of cure are—1st. To allay the spasmodic irritability of the laryngeal muscles and fibres of the trachea, by which the

air-passages are contracted, and the respiration rendered stridulous. 2nd. To subdue the inflammatory hyperæmia of the mucous lining of the larynx and air-passages, and thus prevent the secretion from its follicles of false membrane. 3rd. On the failure of these measures, to procure the discharge of the false membrane and support the strength. The means of specially fulfilling these indications are then detailed at length, but of which an abstract cannot well be given here.

EPIDEMIOLOGICAL SOCIETY.

ON the formation of this Society, application was made by the President, Dr. Babington, to various public bodies for their co-operation: the fruit of this judicious step is now being realised. The Committee on Small-pox and Vaccination have deputed two of their members to examine the returns annually made by the medical officers appointed by the various Boards of Guardians, according to the requirement of the Act of Parliament passed in 1840 "to extend the practice of vaccination." Through the courtesy of the Poor Law Board, every facility for the full examination of these returns has been afforded; and we are informed by the Hon. Secretaries of the Society that a large body of the most valuable and elucidative information has by these means been obtained by the deputation. Our readers will be enabled to judge of the importance of these official documents when we state that they show the total number of persons vaccinated yearly by the public vaccinators in each district of the 631 Poor Law Unions in England and Wales, giving in separate columns those who are under one year, and those above one year of age; and likewise distinguishing, in most instances, successful from the unsuccessful vaccinations under and above one year: as the number of births in each Union is also appended, a certain basis is afforded for determining the exact progress of vaccination in every part of England and Wales, so far as the gratuitous system is concerned. The results are now under the consideration of the gentlemen who have gone over the returns; and, although it would be premature at the present moment to state the conclusion to which they point, we may affirm that they promise to constitute one of the most important and trustworthy contributions hitherto made in this country to the statistics of vaccination.

LIVERPOOL MEDICAL SOCIETY.

Torn Umbilical Cord.—MR. HIGGINSON.

THE child in this case had fallen from the mother, and the cord had broken spontaneously. The torn ends were nearly as sharp-edged, and flat, as if cut; a fact which may have an important bearing upon medico-legal questions, as to whether the child has dropped and the cord been thus torn, or cut by the mother or a third party.

Blindness from general Opacity of the Cornea and Cataract, cured by operation. —DR. NOTTINGHAM.

Dr. N. read a paper on a case of blindness from general opacity of the cornea and cataract, in which, after long-continued general treatment, the opacity at the upper and outer part of the cornea was removed; the central part of the opacity not yielding to treatment, an artificial pupil was made by the excision of a portion of the iris, opposite to the diseased part of the cornea. Some weeks after, the breaking up of the cataract was practised, and thus sight at length restored.

Dr. GEE shewed the *Uterus and Appendages removed from a Woman who died of Carditis in the sixth month of her pregnancy.*

MR. BANNER mentioned the case of a lady whom he had lately delivered at the full period. She had, in the seventh month of her pregnancy, a severe attack of small-pox. The attempt had been twice made to vaccinate the child, and unsuccessfully. Did the small-pox in the mother render the infant insusceptible to the effects of the virus? A similar case was mentioned in a recent number of the London Journal of Medicine. In this child vaccination was unsuccessfully attempted.

Fracture of both Olecranons.—

MR. FLETCHER.

The particulars of this case have already appeared in a weekly journal.

Absence of the Bladder.—MR. ATCHERLEY.

In this case there was found, post mortem, a large pelvic abscess, and no trace of bladder; but it was considered that the account of the examination was deficient in some important points. The discussion on it was therefore adjourned.

Traumatic Mania successfully treated by the local application of Morphia.

A Prussian sailor, 40 years of age, of strictly temperate habits, injured the fore-

finger of his left hand with a marline spike, on the 7th of August. The wound was washed with salt water; it did not heal, but became much inflamed, and very painful. On the night of the 17th he jumped overboard; he was picked up, and, on the following day reached Liverpool. His finger was then lanced freely, and a quantity of matter let out. On the following day he became furiously maniacal. Opium, chloroform, and the cold douche, were successively used, with temporary benefit. On the 22d, two grains of acetate of morphia mixed with a little chalk were sprinkled over the wound, and a poultice applied; in an hour and a half he fell asleep; at midnight he awoke; the morphia was re-applied, and he again slept. In the morning he was calm, and on the day following he was quite rational. He remained under observation for a month without a relapse; at the end of this time the wound had nearly healed, and he sailed from this port.

ACADEMY OF MEDICINE, PARIS.

Nov. 18, 1851.

Umbilical Superfetation.

A REPORT was read by M. Danyau, upon a case by Dr. Sulikowski, (Meurthe). M— D—, born in 1833, had at birth a remarkably large abdomen, which increased in size till the age of ten years. During this period her health was greatly impaired, and she suffered much from abdominal pains and other symptoms. In 1843 a rupture took place at the umbilicus, and from twelve to fourteen pounds of serous liquid escaped; the tumour was notably diminished; through the opening left in the parietes a substance could be perceived, fleshy, resisting, red, and studded with teeth and hair. Several years afterwards the tumour was successfully removed by operation, and was found to contain a deformed male foetus.

ACADEMY OF SCIENCES, PARIS.

Nov. 10, 1851.

Substitutes for Mercurials in the treatment of Syphilis.

M. ROBIN read a note on this subject, followed by a recital of the researches of M. Vicenti, also on the same question.

In a previous communication, M. Robin had enunciated the idea that mercurials do not exert any particular mode of action upon syphilitic disease, except in combining with the virus, and converting it into

a new and inert compound. Many other substances, M. Robin had stated, possessed the same powers—*e. g.* preparations of arsenic, gold, silver, iron, and antimony, and therefore might advantageously replace the mercurial medication.

With this view, M. Vicenti had, at the request of M. Robin, studied experimentally the action of bichromate of potash. The following is a summary of the results:—

1. That the bichromate of potash possesses most undoubtedly anti-syphilitic properties more active and energetic than mercurial preparations.

2. That in the three cases in which it was administered no ill effects followed. The nausea occasionally excited is readily allayed by opium.

3. That being soluble the bichromate is rapidly taken into the system.

4. That the bichromate of potash may advantageously replace mercurials in the treatment of syphilis.

Connection between Respiration and the presence of Sugar in the Urine.

M. ALVARO REYGNOSO referred to a note in which he had previously stated that all substances which repress the frequency of respiration, and thereby diminish hæmatisation in the lungs, tend to the production of sugar in the urine. Acting upon this principle, M. Reygnoso had been able to cause the appearance of sugar in the urine by employing the contra-stimulant treatment. According to the generalization of M. Robin, those substances which arrest the slow combustion by moist oxygen after death are hyposthenic or contra-stimulants during life—*e. g.* the metallic salts, ethers, salts of quinine, and narcotics generally. Having examined the urine of persons under the influence of salts of mercury, antimony, opium, and quinine, M. Reygnoso had found it to contain sugar, and he had also found that the sugar disappeared from the urine in proportion as the salts were eliminated from the system.

On the Effects of Virulent Matters when taken into the Stomachs of Man and the Lower Animals.

M. REGNAULT, director of the Veterinary School at Alfort, gave the following summary of his researches:—

1. The dog and pig may eat all the products of secretion whatever they may be, without prejudice to their health; all the cadaveric debris proceeding from animals suffering under glanders, furuncular disease, rabies, the contagious typhus and pneumonia of oxen, and the contagious epizootics of fowls.

2. It is not the same with fowls, unless perhaps with the exception of their own

diseases, in order to determine which it would be necessary to make the experiment out of the epizootic atmosphere, which M. Regnault has not been able to effect.

3. The virulent matters of rabies and acute glanders, which lose their contagious properties by transit through the alimentary canal of the dog or pig, retain them in passing through that of the horse.

4. The matter of the furuncular disease which is taken with impunity by the dog and pig, gives rise to disease when swallowed by the herbivora, the sheep, goat, and horse.

5. Carnivora and omnivora eat the matters with impunity, because their organization is adapted for the conversion and digestion of animal matters, while that of the herbivora is suited only to the digestion of vegetable substances.

6. The flesh of the pig that has eaten these virulent matters is perfectly safe for human food.

7. Culinary operations so change the poisonous nature of the matters proceeding from animals with either of these contagious maladies, that they have been swallowed with impunity by herbivora.

From these conclusions the author draws the inferences, that there is no reason, in a sanitary point of view, for preventing pigs, fowls, &c., being fed on such matters; and, that however repulsive it may seem to the human being, meat, milk, &c., of animals suffering under contagious maladies may be eaten with impunity, if previously cooked or boiled.

On Arrest of Development as a Sign of Cretinism.

M. BAILLARGER read an essay in which he pointed out that two different opinions have been held by authors upon the nature of cretinism; according to the one it is a form of idiocy; according to the other, it is entirely a state of physical degradation. M. Baillarger considers that he has reconciled these opinions by assigning one essential cause, an arrest of development of the organization. Thus, he has in a large number of instances ascertained that second dentition has been delayed to the age of eighteen to twenty-four years, and that the signs of puberty have been postponed to this age. The whole aspect, figure, &c., is that of a child of eight or ten years, when they should be young men or women. This arrest of development points out the line of demarcation between cretinism and idiocy, as in the latter state the body is generally fully developed.

Asphyxia from Pathological Compression of the upper part of the Spinal Cord.

M. JOBERT DE LAMBALLE related a case

in which disease of the ligaments and bones of the cervical vertebræ caused compression of the upper part of the spinal cord by the odontoid process. The patient died suddenly from asphyxia. This case M. Jobert considered as illustrative of the opinions held by M. Flourens.

Hospital and Infirmary Reports.

ST. THOMAS'S HOSPITAL.

Cases from Mr. Simon's Practice. Reported by MR. MILTON.

Epithelial Cancer of the right side of the Jaw—Extirpation—Recovery.

NOTWITHSTANDING it has been urged against the extirpation of cancerous parts that the disease is never cured by it, and that if in some favourable instances it effects a suspension of the march of the disease, it in the greater number really hastens the fatal termination, yet this verdict, though promulgated under high authority, would require to be received with some reservation.

What purpose would it answer to prove that in nine cases out of ten the disease does return and destroy the patient? Would not all the ten cases have certainly proved fatal if not operated upon?

So important does this subject appear, that we trust our readers will excuse us if we go at some length into the reasons which seem to bear on interference with cancerous diseases.

1. Operating undoubtedly saves some patients, and in others is followed by no return of the disease for many years: thus assuring a long interval of ease and some prolongation of life.

2. When the disease does return it is not more fatal, for that is impossible, than at its first appearance; and its being more rapidly fatal can scarcely be, in common humanity, considered as an objection, as then the struggle is shorter and sooner ended.

3. It is better to save even one patient out of twenty than to lose them all without a struggle; for it may be assumed as nearly a general rule, that at the period when patients will allow the operation to be performed, the disease is always so far advanced that it would of itself destroy the patient.

4. Most of the operations for cancerous diseases are not of a nature to endanger life, and owing to the discovery of chloro-

form, not likely to be attended with severe suffering.

Finally, the exact proportion of cases in which cancer returns after removal by the knife, to those in which patients live the rest of their days free from its invasions, is not well known; and till this is done no part of the question can be looked on as satisfactorily settled. Extended and complete series of hospital reports and clinical histories of individual cases will in time go far to yield materials for arriving at a definite solution of the difficulty.

But though a high authority* has told us that, "undoubted cancerous tumours have, both before and after ulceration had set in, been cured or rendered perfectly innocuous by one or other of a variety of natural processes occurring spontaneously;" that "an unbiassed survey of recorded experience does not warrant the notion of the invariable incurability of the disease by medicinal means at any stage of its progress;" and that testimony, which I am enabled to corroborate from my own observation, is not deficient to the fact that growths, cancerous in essence, may at an early stage be totally removed by a persevering use of certain external and internal remedies;" yet scarcely a surgeon is to be found who places even the slightest reliance on any means either of cure or of arrest, except the knife, and we learn from the very writer who gives us such consolatory hopes that, "in a certain number of instances, all medicinal agents not only fail in influencing the disease favourably, but if persisted in, would infallibly exasperate it." Here unfortunately as in too many instances no guide exists to enable us to distinguish beforehand, those cases which will, from those which will not bear treatment.

Mr. Simon's patient, a man of forty-five years of age, was recently admitted into St. Thomas's Hospital, with epithelial cancer on the right side of the lower jaw. The following history was transmitted by his medical attendant to Mr. Simon, and kindly communicated to us by Mr. C. T. Richardson.

His occupation was that of watchman to the Rochester Oyster Fishery, and he had been in the habit of living in a fishing boat for six weeks at a time, his only relaxation being an occasional visit on shore, which lasted from the Friday to the Monday. During his residence in the boat, he procured himself provisions at Upehureh, a village situated at ten miles distant from the fishing station.

In November of last year his mother died. He seems to have been attached to

her; and, though always unsteady, now began to drink as hard as his circumstances would allow, being drunk the whole time he was on shore, and probably procuring drink when he sent for his provisions.

He has never been well since his mother's death, and has complained of rheumatism of the jaw, as he termed it, for the last twelve months.

Some time between the 1st and the 14th of June, 1851, he pulled out a tooth in the situation of the tumour, which had not then appeared: this he did to relieve the pain in the jaw, in which, however, he was disappointed. From this date the tumour made its appearance, and it had progressed considerably by the 14th of August, the time he was first seen by his medical attendant.

"When I first saw him (this gentleman says in his communication), there was a hard swelling over the lower jaw on the right side, with a fungus springing from its buccal surface."

"Hæmorrhage first occurred about the 28th of August, when a pint or more of blood was said to have been lost. It recurred to a less extent several times before he was admitted into St. Thomas's Hospital."

On examination, the tumour was found to be seated on the right and external surfaces of the lower jaw. It was of considerable size, and extended from the angle a good way towards the symphysis, bulging out the cheek, and so adherent to the mucous membrane and skin that Mr. Simon was compelled, when performing the operation, to remove a considerable portion of this at the same time. The tongue was thrust over towards the left side of the mouth. The tumour was of irregular form, and its lower margin barely permitted the inferior edge of the jaw to be felt below.

As there was now daily hæmorrhage from the tumour, disturbed rest, and loss of appetite, Mr. Simon was induced to operate at once, especially as epithelial cancer of this kind is less liable to return than any other variety of the disease.

Instead, however, of detaching the jaw-bone by sawing it across anterior and posterior to the seat of the disease, the operation removed the whole half of the bone at its articulations, considering that each half is in pathology a separate bone, and that the only chance of safety lies in not leaving any disease behind. Only a very small portion could have been saved, which would have been of no use, and might have contained the germs of disease.

During the first twenty-four hours after the operation, a great deal of the nourishment which was given him escaped, partly

* Walshe.

by the wound, and partly by the mouth. The man was too low to allow of anything like starvation; and therefore it was deemed advisable at once to resort to artificial support. A flexible catheter was used as a feeding tube, and introduced through the nostril, thus allowing a supply of food to be conducted to the stomach without any impediment.

The case succeeded remarkably well; great part of the wound healing by the first intention; and, within a fortnight, the whole line had closed, except where the elliptical portion had been removed on account of adhesions. This left a fistulous opening, which Mr. Simon proposes, should it not close, to pare, and bring the ends together, anticipating then a complete union of the wound.

HOTEL DIEU.

Case of Poisoning by Tincture of Digitalis.

By Dr. OULMONT, Senior Clinical Physician in the Faculty of Medicine, &c., Paris.

THE following case possesses features of considerable interest in relation to the recent researches of MM. Homolle and Quevenne on the physiological and therapeutic action of digitaline, which results it in some measure confirms; at the same time it presents several particulars of interest, from their rarity.

CASE.—Marie Greilsammer, twenty-two years of age, a servant, was admitted into the hospital, under the care of M. Louis, on the 4th January, 1851. She was of a good constitution, and had menstruated regularly from the age of fifteen years. She had always good health up to the last four months; at which time she was seized with pains in the limbs, swelling of the feet, and difficulty in walking. Subacute rheumatism was detected at this time, and was successfully treated, in about a fortnight, by leeching and vapour-baths. About this period she complained of severe palpitation of the heart: nothing, however, could be detected but increased force in the heart's beats. After the disappearance of the rheumatism, there remained a peculiar nervous irritability, with agitation, trembling of the limbs, and loss of appetite. These symptoms so seriously inconvenienced her that she was obliged to leave her situation. Four weeks afterwards she was seized with a return of the palpitations, for which her medical attendant prescribed some pills and powders, and friction on the epigastrium with a brownish liquid. The pills, it was subsequently ascertained, were purgatives; the powder, digitalis; and the

liquid, tincture of digitalis. Under the influence of these remedies the symptoms subsided, so that she was enabled to return to service and perform her duties. On the twelfth day, having returned to work, she was much fatigued, and experienced a return of the palpitations and general malaise, &c. This condition continued for several days, when another physician was called in, who advised her to take internally a few drops of the tincture that had been sent for external use, enjoining at the same time a nourishing diet of meat, wine, &c.

On the day that this physician saw her she took five drops of the tincture, and, on the following day, about the same dose, but without counting the drops. No effect was produced. On the third day she took, in the morning, a dose, the amount of which she could not specify. She stated subsequently that she believed that she had taken nearly the same as before, and that she had judged by the colour it imparted to the water. On repeating the process before the patient, it appeared that she must have taken about a teaspoonful. This quantity she had taken in a single dose, at seven o'clock in the morning. At eight o'clock she had eaten a meal: it was not until twelve o'clock that she felt any ill consequence from the medicine: she then experienced a general feeling of *malaise*. This did not prevent her taking her second breakfast. She had natural defecation and micturition. At one o'clock she was again seized with general indisposition, and vomited freely; at first merely alimentary matters, then a greenish liquid. She then took some infusion of orange-flowers, which seemed to increase the sickness. A physician who was summoned prescribed infusion of coffee, and a draught which appeared to have contained camphor. These were both rejected, and the vomiting continued all the evening. At the same time she suffered from a sense of extreme anxiety, which she referred to the epigastrium, an intense fixed pain over the right orbit, some considerable derangement of vision, tinnitus aurium, and a feeling of great debility. Towards five o'clock she experienced spasmodic movements in the muscles of the thighs; and soon afterwards a slight rigor, followed by increased heat. When admitted into the hospital, at eight o'clock in the evening, she was almost pulseless. Infusion of coffee, sinapisms, &c. &c., were immediately employed.

On the morning of the 5th of February, she was in the following condition:—The face pale, with a greenish livid tinge; an expression of extreme prostration; no headache, but vertigo and tinnitus aurium; sight impaired, so that she could not

clearly distinguish objects before her; the pupils dilated and moveable; intellect clear; extreme sensitiveness in the epigastric region, producing frequent deep sighs; continual nausea. While being questioned she twice vomited a few spoonfuls of a greenish fluid. The abdomen was not distended, but felt hard. The action of the heart was strong and energetic: this increased action extended over the entire left side; there was no vibration, nor any morbid sound; the first sound was dull and prolonged, the second clear; the beats were intermittent and irregular; the pulse was hard and strong; there was no morbid sound in the cervical vessels. The tongue was pale, and free from coating. The bowels had not acted, and she had not voided urine since the previous day. The bladder was distended, and could be felt above the pubis. Respiration was irregular, and performed by frequent deep sighs. The chest was moderately sonorous on both sides; the respiratory murmur was feeble.

The patient lay on her back, and seemed completely prostrated, being scarcely able to move a limb. Seltzer water, ice, cataplasm to the abdomen, infusion of tea, and catheterism of the bladder, were the means employed.

Feb. 6th.—No sleep; vomited green matter three or four times during the night; slight delirium, with some agitation. This morning she is somewhat better; has more colour in the face. Had one scanty green evacuation from the bowels. Is extremely thirsty; sucks the ice with avidity. Has frontal headache. Vision clear; the pupils less dilated. The state of the heart is much the same as yesterday. About half a pint of urine was drawn off by the catheter. The bowels have not acted.—A purgative enema to be administered.

7th.—No sleep. Rather violent delirium in the night. Had not vomited again until this morning. The prostration is greater this morning. Headache severe; thirst excessive; pain in the epigastrium, extending to the abdomen; pulse hard. Has not passed water since the catheter was used. Has had one scanty stool.

8th.—Was so delirious during the night that it was necessary to use restraint. Entirely sleepless; much agitated; continually complaining. Acute pain in the abdomen. No vomiting. Bowels have not acted. Thirst excessive; desire for cold drinks. Tongue moist and clean. The face pale, and expressive of debility. The eyes fixed; pupils not dilated. Continual sighs and groaning. Answers questions connectedly. The heart's action has lost its force; its beats are more frequent

and intermittent, and sometimes irregular. Has passed her urine voluntarily; the urine thick, having a dense white sediment.

9th.—Has not slept; has not been delirious nor vomited; is less anxious: the pain in the abdomen continues; the lavement had caused three evacuations: urine voided at same time: pulse same as yesterday.

10th.—Has slept a little; the headache is less; the extremities warm; abdomen still painful; evacuations from bowels and bladder; pulse still hard and irregular.

11th.—No sleep; no delirium; has headache, and ringing in the ears; constant severe thirst; tongue white and dry; four stools. To take a potion with *Ext. Thebaïcæ*; two enemata.

12th.—Has slept a little, but interrupted by dreams; has no headache; the face is recovering its colour. She still presents the aspect of depression; thirst moderate; some return of appetite; the pulse preserves its force and volume; is about 80, but irregular: the beats of the heart are strong; a *bruit de soufflet* is heard from the base of the heart, along the aorta to the vessels of the neck.

13th.—Some sleep; with dreams; aspect natural; still some pain in the abdomen; diarrhoea; pulse stronger and less irregular. Opiae enema.

From this time the patient continued improving. The heart's action remained strong and energetic, accompanied by the bruit, and did not lose its intermittence until the end of May. The patient was able to leave her bed and walk about the 22nd of February; the state of debility gradually disappeared under careful regimen and steel medicine. She left the hospital recovered on the 5th of March.

REMARKS.—This case is interesting in a two-fold point of view—practically and scientifically. Practically, it shows the imprudence of a medical man prescribing an active medicine without giving very explicit instructions regarding its dose.

In a scientific point of view, the length of the interval, five hours, that elapsed between the taking the dose and the appearance of symptoms of poisoning, is worthy of observation. MM. Homolle and Quevenne have not recorded a similar instance in their memoirs on the action of digitalis. Some cases of this kind are, however, on record. Chantourel has mentioned several. A case was related to M. Oulmont by a distinguished practitioner. The patient had been taking digitalis in ordinary doses, when, menstruation occurring, the medicine was withdrawn during the catamenial flow. On resuming the use of the medicine, the patient was seized with all the symptoms of

poisoning by digitalis, although she had not resumed the use of that medicine. Without attaching too much importance to this case, it must be admitted that in a large number of instances a considerable time elapses between the administration of the medicine and the manifestation of its effects. It is to this fact that must be referred the powerful action of the drug when taken into the stomach. At other times, the medicine being rapidly absorbed, there result serious consecutive symptoms. In the case related it is remarkable that the cerebral signs of narcotico-acrid poisoning did not appear until the second day.

There can be no doubt that this was a true case of poisoning by digitalis, the symptoms presenting some peculiarities which are here indicated. The pulsations of the heart were much affected, their number having been reduced from 80 to 38, and rendered irregular; at the same time that, far from being feeble, the force of the pulse was augmented,—a circumstance noticed, also, by MM. Homolle and Quevenne. The diuretic action of digitalis was not exhibited in this case; on the contrary, the urine was deficient throughout,—a fact which is, perhaps, attributable to the presence of narcotism.

To the above narrative MM. Homolle and Quevenne, appreciating its value, add a few observations.

Two circumstances strike them,—one is, the peculiar aptitude of this patient to be affected by the medicine, and the resistance offered by her constitution to the most approved treatment; the other, the conformity of the symptoms with those observed in their experiments on poisoning by digitaline.

HÔPITAL BEAUJON, PARIS.

Hypogastric Lithotomy in a man who presented all the signs of a large Calculus encysted on the anterior wall of the bladder: instead of a Calculus, a pen-holder encrusted with lithates. Under the care of M. HUGUIER.

THE surgeon is exposed, in the practice of his art, to meet with particular circumstances altogether unforeseen, and under which the best established, and apparently most rigorously deduced diagnosis is utterly useless in preserving the surgeon from an inevitable error. Such is the character of the following case that has recently occurred to M. Huguier.

CASE.—A man thirty-four years of age, of a bad constitution, was admitted on the 14th of September, suffering under

vesical catarrh, with which he said he had been troubled about two years. He had also other symptoms, such as frequent occasions to pass his urine, persistent pain in the region of the bladder. The physical characters of the urine were not notably changed. The patient was otherwise reserved in the details of antecedent circumstances.

On the day following his admission, his bladder was examined with a large-sized metallic sound, which passed through the urethra freely, and entered the bladder; when moved anteriorly it came in contact with a hard substance, on which it communicated a rough grating sensation to the hand of the examiner. No reasonable doubt could be entertained, after a thorough examination of this substance, that it was a calculus of considerable size. The signs of its presence were wanting at the posterior portion of the bladder, and were immediately reproduced on the moving the catheter in a forward direction, where its concavity embraced the foreign body.

There was, therefore, no further doubt of the nature of the case—the man had stone: the determination of this fact was a point gained; but was it enough? Was it not requisite, in a therapeutical point of view, to ascertain the reason of the unusual, and, to a certain extent, abnormal condition, of this calculus? M. Huguier considered that it must be encysted, or simply adherent. Adhesion implied long contact between the surface of the concretion, and that of the bladder. Now, how could this contact be effected? It was impossible that it could have occurred with a stone in the position of this, contrary to its gravitation! Was it, then, encysted? This seemed probable. It was possible that a concretion might have been lodged in a hernial protrusion between the fibres of the bladder, or in a pouch of mucous membrane formed by a congenital deficiency of the anterior wall; the contractions of the bladder, which its presence would have excited, serving to detain and fix it in its position the more firmly. Calculi thus encysted on the anterior aspect of the bladder are not altogether rare, M. Leroy-d'Etiolles having recorded several instances.

What therapeutic indication resulted from the preceding diagnosis? Lithotripsy was excluded by the fixed position of the calculus. Lithotomy must, therefore, be had recourse to. The question then was, whether perineal or hypogastric lithotomy should be practised. M. Huguier was of opinion, from the size and position of the stone, that the perineal operation would be attended with serious difficulties and danger, while from the thinness of the

subject the bladder would readily be reached by the hypogastric region, and the adhesion of the calculus destroyed, when its extraction would be readily effected. This method also offered the advantages of the possibility of cutting down upon the cyst itself.

The patient was brought under the full influence of chloroform, and an incision having been made into the bladder, it was supported and the orifice maintained by means of an instrument contrived by M. Leroy-d'Etiolles, and which he had named the *souleveur de la vessie*; this is composed of two branches, terminating in rounded, smooth extremities, which, when separated, support the bladder on each side.

With the index finger of the right hand in the bladder, M. Huguier explored in all directions, and ascertained that the foreign body was elongated and bent on itself in the middle; it was placed obliquely from right to left, and from above downwards, being attached very firmly to the mucous membranes at each extremity: by detaching first the lower end, M. Huguier removed the body, and found that it consisted of a pen-holder between three and four inches in length, preserving its metallic brilliancy at each end where it had been impacted in the bladder: in the central portion, to the extent of nearly two inches, it was encrusted with calcarous conerctions, thickest in the middle and progressively thinning off towards each end. This substance had the appearance of one of the cork floats used by fishermen.

When the patient came to himself he expressed surprise that he had undergone an operation, and inquired calmly, and without any appearance of reservation, if the stone had been extracted. He had sufficient prudence, for obvious reasons, not to express any signs of consciousness that anything unusual would be removed from his bladder.

After the operation, M. Huguier introduced two sounds into the bladder; one, of the ordinary size passed by the urethra, and the other, much larger, fixed in the wound; with the object of insuring free exit for the urine, and preventing infiltration of that fluid into the cellular tissue.

The patient went on favourably during the first few hours. He inquired if the stone was of a large size, and appeared satisfied with the answer. In the evening he complained of pain around the wound. The pain increased in severity, and hiccup was added. Leeches were applied to the abdomen. On the following morning, the patient was worse. Mercurial ointment was rubbed on the abdomen, which was not tense, although sensitive to pressure. The hiccup continued, vomiting of a dark

fluid occurred; a cadaveric odour proceeded from the wound. Infiltration of urine, and commencing gangrene, was suspected. The pulse gradually failed, and forty-eight hours after the operation, the patient died.

The body was examined with great care by M. Huguier. Blood was found extravasated in the abdomen. The peritoneal coat of the intestines was injected, and pus was found at different points. Infiltration of urine was found behind the pubes. The muscles present the softening of commencing gangrene. The bladder was small, its parietes thickened, its tissue dense and firm, the mucous membrane at the posterior and lower portion coloured by infiltration of blood. Excavations were found in the parietes of the bladder, corresponding with the two ends of the pen-holder; these were prevented having become perforations by a thin layer of fibrous tissue in each excavation. The peritoneal cavity was found to have been opened by the operation; a circumstance which accounted for the fatal termination, but which at the same time was found to have been unavoidable from the contracted and diseased state of the bladder.

Correspondence.

DR. BASCOME ON EPIDEMIC PESTILENCES —THEIR ORIGIN AND ALLEGED IMPORTATION.

SIR,—Having perused your last number, I hasten to remove the evident misapprehension under which your reviewer laboured when noticing my work on epidemic pestilences.

Your reviewer considers the following opening paragraph of my book to be directly contradictory of sacred history:—

“It is recorded that in the month Adar,—answering, according to our computation of time, to the period between the middle of February and March, the end of the Jewish year,—during the reign of Pharaoh IV., king of Egypt, in the 80th year of the life of Moses, the sacred historian and great captain of the hosts of Israel, many awful prodigies in the natural world commenced, especially in commotions of the elements which were succeeded by a pestilence destructive to both men and beasts in the low lands of Egypt. This terrible pestilence was preceded by commotions of the elements—hail, thunder and lightning, heat and drought, the generation of insects, &c.; for the summer had been hot, and attended with heavy, cold, nocturnal dews, alter-

nating with rains, after a humid winter. The weather had been very variable: the excessive heats and hot winds exhausted the inhabitants by day, and the cold damp dews chilled them by night. The atmosphere was so filled with fiery elements, and elouds of dust and sand, that men and cattle were in imminent danger of suffocation, and were compelled to seek shelter from these dry storms and tempests," &c. &c. (p. 1).

That the paragraph in question is divested of Scriptural phraseology I admit, but that *it*, or any passage of my work, is at all contradictory of sacred history, I deny; inasmuch as, so far from questioning, I distinctly disavow any the slightest intention of impugning divine authority, as the following paragraph, at p. 193, will fully show:—

"The books of God, in tracing the hand of Omnipotence through the medium of *secondary* causes, producing effects punitive of guilty mortals, attribute all diseases to the *immediate* interposition of Divine Providence: 'Pestis et ira Deum Stygiis sese extulit undis.'"

And why?—Because God is the first great cause, the original Creator of all things, the preserver and governor of all things in heaven and on the earth, and likewise the sole disposer of the elements.

Seeing, therefore, that our Creator, while possessing the sovereignty of the universe, may employ what agencies he pleases for the execution of his purposes, we, in investigating the causes of all distempers, without in the slightest degree impugning their divine origin, can perceive that the Almighty Disposer of events effected his purposes by the employment of *natural* means. Further, in expounding the causes of disease, as existing in natural and common things, and modification of beings and things of this natural world, we can do equal homage to the Almighty's wisdom and goodness, omnipotence, justice, mercy, judgment, and providence, as we can in displaying them as *immediately* inflicted on guilty man; yea! more glorious do the attributes of the *Most High* appear in the sublime mysteries of nature!

That there are persons who dare not on Scriptural matters exercise the reason with which they have been gifted I am fully aware: they fearing, or considering it to be dangerous, to inquire *too nicely*, as they term it, how the extraordinary manifestations of the Almighty power were ages back produced, lest the fulness of that power should *seem* to be called into question: such fears I consider to be not only irrational, but also culpable, especially as regards scientific investigation.

In conclusion, I cannot omit allusion to

your reviewer's opinion as to the line of argument adopted by Dr. Bryson on cholera.

With all deference for the views and opinions of others, I cannot admit Dr. Bryson's *fact* (?), which at p. 507 of his recent pamphlet the terms an important one, "that cholera occurs *first* in seaport towns." The pages of history will not bear him out in any such fact, as, had I space, I could fully determine. Because cholera has *frequently* broken out in seaport towns, it by no means follows that the malady is either *importable* or *contagious*.

From a variety of well-digested facts, founded on scientific views, supplied to us by history, less one-sided or more rational conclusions as regards the production of cholera and other epidemics, I opine, may be arrived at.

In seaport towns, as well as in various other localities, we have strangers arriving and subjected to our variable climate, such variableness or vicissitude acting on such strangers—unacclimated persons—as the exciting cause of disease; whilst the debaucheries and irregularities common with strangers, especially in seaport towns, by enervating, &c. &c., may be viewed as the predisposing causes of disease. Quere? Kurrachee may be said to be more or less a seaport town. Could the rapidly wide-spreading cholera which caused such frightful mortality in twenty-four hours have been imported?

Fearing that I have already trespassed too largely on your columns, I beg to subscribe myself

Your obedient servant,

E. BASCOME, M.D.

Brentford, Wyke House, Nov. 19, 1851.

* * * The only part of this letter which requires a comment is that which refers to the argument of the alleged importation of cholera by reason of its frequent outbreak in *seaport* towns. We quite agree with Dr. Bryson that cholera has in many cases made its first appearance in seaport towns where ships have arrived from countries already suffering from the disease. This evidence in favour of importation has been noticed in most insular and littoral states, as well as in the great continent of America, and it is a subject which ought to receive, and no doubt will receive, the serious attention of the Quarantine Congress. Dr. Bascome both admits and denies the fact. We will deal with his admission; and here the only difference between himself and Dr. Bryson is, that while Dr. Bryson considers the ship to bring with it the disease or *materies morbi*, Dr. Bascome says it brings with it *unacclimated persons*, and seaport towns are prone to debaucheries

and irregularities which may act as an exciting cause. As these debaucheries, &c., do not generate cholera, except in connection with the arrival of the unacclimated strangers in a ship, Dr. Bascome's argument would lead to keeping out the ship on account of the crew, while Dr. Bryson would keep it out on account of the disease. The cholera did not break out in Malta from the arrival of unacclimated strangers, and the debaucheries and irregularities at Valetta were not greater than in other seaports where cholera did not show itself.

ON BANDAGING THE ABDOMEN AFTER DELIVERY. MR. KESTEVEN'S REPLY TO MR. ROPER, AND MR. PRETTY.

MAY I be permitted to occupy a small portion of the valuable space of your journal, as briefly as possible, to notice the comments by Messrs. Roper and Pretty upon my paper on Bandaging the Abdomen after Delivery, published in the MEDICAL GAZETTE, on the 12th September.

I first thank those gentlemen for having given my remarks their consideration, and for their intention to set me right where they think that I have arrived at erroneous conclusions.

The point at issue is, however, at present so much a mere matter of opinion that it can only be decided by a large number of observations, and these, so far as my opportunities have afforded me the grounds of an opinion, have led me to the conclusions I have propounded in the Gazette.

Mr. Roper, differing from these, very properly submits my several propositions to a close examination, and compares them with the opinions at which he has himself arrived. Mr. Roper agrees with me upon the most important point,—viz., that “the right period for the application of the bandage is after a good contraction has taken place;” but, upon another point,—viz., that the bandage “averts the tendency, which sometimes exists, to relaxation, after the contraction has been duly obtained,” I differ from Mr. Roper, believing that I have generally found the bandage useless for this purpose, and often requiring to be removed in order effectually to gain this very desirable result. Upon several minor points we concur, upon some others we differ, but it would encroach too much upon your space were I to enter upon the consideration of all these. I must refer those of your readers who may deem the matter worthy of their attention, to Mr. Roper's letter and to my paper, above referred to; at the same time I may thank that gentleman for his candid and fair criticisms.

Mr. Pretty's observations appear to be

principally directed to the object of advocating the use of a particular compress, which he has introduced to the notice of the profession, and which, if I could with Mr. Pretty see the advantages, instead of the disadvantages, of bandaging the abdomen directly after delivery, I should most gladly employ, as from the author's description it is admirably adapted to the purpose of producing uniform pressure.

If subsequent experience and reflection should in any way modify the opinions expressed in my paper on this subject of the use of the obstetric bandage, and which opinions I at present see no reason for abandoning, from anything that has yet been urged to the contrary, I shall not hesitate to own my obligations to the two gentlemen whose communications I have here noticed.

I will not further trespass upon your space, but will conclude by referring to page 189-190 of Dr. F. Ramsbotham's “Principles and Practice of Obstetric Medicine and Surgery,” where the opinions I have expressed with regard to the period of the use of the bandage will be found to coincide with those of that author; of which coincidence, however, I was not aware at the time that I wrote my paper, or I certainly should have fortified myself with the aid of such an excellent practical observer.—I remain, sir,

Your obedient servant,

W. B. KESTEVEN.

Upper Holloway, Nov. 24, 1851.

Medical Intelligence.

ROYAL SOCIETY.—ELECTION OF OFFICERS.

THE anniversary meeting was held on Monday, the Earl of Rosse, president, in the chair. His Lordship delivered his annual address, after which the Copley medal was presented to Professor Owen for his important discoveries in comparative anatomy and palæontology, published in the Philosophical Transactions; one of the Royal medals to the Earl of Rosse for his observations on the nobulæ, and the second Royal medal to Mr. G. Newport for his paper on the impregnation of the ovum. The society then proceeded to the election of council and officers for the ensuing year, and the following noblemen and gentlemen were elected:—President.—The Earl of Rosse, K.P., M.A. Treasurer.—Lieut. Colonel Edward Sabine, R.A. Secretaries.—Mr. Samuel Hunter Christie, M.A., and Mr. Thomas Bell. Foreign Secretary.—Captain W. H. Smyth, R.N. Other members of the Council.—Mr. William Bow-

man; Mr. Benjamin Collins Brodie; Mr. Charles Brooke; the Rev. Professor Challis, M.A.; William Clark, M.D.; Charles Giles Bridle Daubeny, M.D.; Sir P. de Malpas Grey Egerton, Bart.; the Very Rev. the Dean of Ely; Mr. J. P. Gassiot; Marshall Hall, M.D.; Sir John Frederick W. Herschel, Bart.; Professor W. Hallows Miller, M.A.; Lieutenant Colonel Portlock, R.E.; Mr. Edward Solly; Mr. William Spence; Nathaniel Wallich, M.D.

KING'S COLLEGE HOSPITAL.

ON the 27th ult., a quarterly general court of the governors of the above charity was held in the board-room, the Rev. Dr. Jelf, Principal of King's College, occupying the chair. The report stated that, on the 25th of March last, 116 patients were in the wards, and during the subsequent half-year, 617 had been admitted, making a total of 733. Of these, 549 were discharged cured, 26 incurable, 9 disorderly, 51 died, and 98 remained under treatment. The out-patients during the same period reached 15,978, making a total of each class of 199,436 since the opening of the hospital. The income had fallen short of the expenditure by upwards of 950*l.*, and pecuniary assistance was much needed to remove the liabilities incurred. It was announced that the charter for incorporating the hospital had lately received the Royal assent, in consequence of which it was necessary to adopt a common seal, and alter the bye-laws so as to agree with a corporate body. It was stated that the building and endowment committee had continued their labours, and much progress had been made in the plans of the new building. The report having been unanimously adopted, on the motion of Mr. Dennison, seconded by Sir Walter Riddell, the chairman announced the receipt of 30*l.* from an "Old Pupil of King's College," and a further donation of 105*l.* from the Rev. J. H. Fisk, in addition to former contributions to the amount of nearly 2,000*l.*

UNIVERSITY OF OXFORD.

MEDICAL APPOINTMENT—RADCLIFFE INFIRMARY.

AT a special court of this institution, Mr. R. J. Hansard was unanimously elected surgeon to the infirmary, in the room of Mr. G. Hitchings, deceased.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 27th November, 1851:—Frederick William Hart Bayes, Stiffley, Norfolk—Thomas Hales, Ford Green, Staffordshire—Alfred Wall, Stratford-on-Avon.

OBITUARY.

ON Friday, the 28th ult., at his residence, in old Burlington Street, after a short but severe illness, John Duranée George, Esq. aged 36.

Selections from Journals.

A CASE OF ABORTION BROUGHT ON BY SAVIN, AND FOLLOWED BY PERFORATION OF THE STOMACH, AND DEATH. COMMUNICATED BY JAMES H. SALISBURY, M.D., OF ALBANY, TO T. R. BECK, M.D.

A LADY by the name of Miss — came into Albany at 3 o'clock on Wednesday morning, July 24th, 1850, on the western train of cars, and stopped at the Delavan House. She entered her name on the register —, and took a room on the lower floor. About 9 o'clock A.M. the same day, she requested a room on the second floor, where she would not be so much disturbed by the noise from the street. At the same time she stated that she wished to remain a few days. Her countenance was pale and careworn—like one sick and troubled. Room 44 on the second floor was given her.

On Wednesday afternoon about four o'clock, she requested one of the waiters to go and get some medicine for her in a two ounce phial, labelled chloroform. She told him to get the medicine that was written on the label of the phial. This was obtained for her, as requested, at Dr. Burton's, near the Delavan House. On the following morning, about 5½ A.M. she rang the bell, and requested the waiter to go to a drug store and get some medicine. She gave him the two-ounce phial, labelled *chloroform*, and told him to get it filled with the medicine written on the label, and also to get a draehm phial of morphine. This the waiter did as requested. No more was heard or seen of her until Friday, 2 P.M., July 26.

At 2 P.M., Friday, July 26th, the key to the door was found on the outside in the hall on the floor, and the door bolted on the inside. On looking through the keyhole, a portion of a lady's wardrobe was observed lying on a chair. The door was immediately burst open by Mr. Clark, assisted by Mr. Colburn.

The body of the deceased lay upon the bed in an easy and natural position, apparently dead. The coroner (Mr. Brower) was immediately called to hold an inquest. Dr. Swinburn was summoned to make a post-mortem. He called on me to assist him.

Autops. cadav. about thirty-three hours after she was last seen alive, and probably about twelve or fourteen hours after death. She was not yet cold. She lay on her back in the bed in an easy and natural position, her left hand lying over the region of the stomach, and her right hand laying off to the right of her at an angle of about 45° . Near her right hand lay two phials, the one containing chloroform, the other morphine.

Her appearance, externally, was normal, except some white froth which had issued and was still issuing from her nose. On removing her from the bed, found her underclothes and the sheets considerably stained with blood in the region of the hips. The blood afterwards was found to have proceeded from the uterus. On laying open the abdomen, found the stomach bearing marks of high inflammation. It was softened and perforated, and its contents emptied into the cavity of the abdomen. There was extensive peritonitis. The perforation was about the size of a fifty cent. piece, and was situated in the region of the greater curvature, near the cardiac orifice. For several inches around the perforation, the stomach was very much corroded, thinned, and softened, so that it was easily torn. Oesophagus in a state which indicated high inflammation. Small intestines very much inflamed for about four feet from the stomach, the remaining portion comparatively healthy. The colon and rectum blackened and inflamed in the vicinity of scybala, which were found to the amount of about a pint scattered through their whole length. These were carefully removed and preserved, together with the intestines, stomach, and oesophagus, for chemical examination. Uterus was found enlarged. It had the appearance of a recently evacuated gravid uterus of from three to four months gone. Empty, except about two ounces of lochial discharge or secretion. Mouth of uterus relaxed and open, so as to admit easily the finger. Vulva and vagina loose and flabby. Judging from the state of the parts, I should think the fœtus had been discharged from two or three days.

She appeared to be about twenty-seven years of age, of a moderately full habit, and possessing naturally a strong constitution.

Chemical Examination.—The stomach, intestines, and their contents, with about one quart of matter vomited up in the chamber, consisting mostly of tea and coffee, and the several bottles containing medicine found in her possession, were delivered to me for chemical examination. This examination was immediately commenced. From the corroded appearance and perforation of the stomach, the pre-

sence of some corrosive mineral poison was suspected. After subjecting the stomach and intestines, the scybala, the contents of the chamber, and what matter had been emptied from the stomach into the cavity of the abdomen, separately to a rigid chemical examination, for all of those mineral poisons which would be likely to produce such a state of things in the stomach, without finding the slightest evidence of any of them, I commenced the search of each part separately for the several vegetable substances of an irritating nature, used as emmenagogues. The first substance tested for was savin. Slight evidence of its presence was found in the stomach and intestines, still greater evidence of its presence in the matter vomited and that taken from the abdominal cavity, and conclusive evidence of its presence in the scybala, or hardened feces. The examination of the aforesaid parts of the body here ended.

Attention was next directed to the contents of the several phials found in her possession. The only one suspected to contain savin was examined. There was about half a drachm in the phial. It was made up of a mixture of oil of savin and tinct. of lavender. No other body was found in any of the phials which would be at all likely to irritate and perforate the stomach. Here the examination for poisons ended. Of the drachm of morphine which she obtained Thursday morning, only 30 grains were left. Of the two ounces of chloroform, only about one half ounce remained. So that from Thursday morning to the time of her death, which probably occurred Thursday night, she swallowed or otherwise disposed of thirty grains of morphine and one and a half ounces of chloroform.

From papers in her trunk, she appeared to be unmarried. The state she was in showed conclusively that she had been pregnant, and between three and four months gone; from the chemical examination, that savin had been administered; from the circumstances of the case, that it had been given or taken to produce an abortion; from the post-mortem, that a violent gastritis had been excited, which resulted in abortion, softening and perforation of the stomach, peritonitis and death. —*American Journal of the Medical Sciences.*

ON THE TREATMENT OF INTERMITTENT FEVER BY LARGE DOSES OF QUININE. BY DR. MEYER, BERLIN.

DR. PFEUFFER, in *Henle and Pfeuffer's Zeitschrift*, has contributed a paper having for its object to show that simple intermit-

tent fever may be cured by a single large dose (ten grains) of quinine, administered on the day that the paroxysm is absent; and that this dose is not followed by any evil effects. With this view, Dr. Pfeuffer adduces thirty-four cases of quotidian and tertian intermittent, treated between the 4th of May and 7th of August, which cases varied in their duration from four days to three months. In these, no return of the fever had been observed after the administration of the ten-grain dose of quinine; whereas, although ague is not endemic or peculiarly obstinate in Heidelberg, from forty to a hundred and twenty grains have usually been required in the ordinary treatment of cases of intermittent fever. Dr. Pfeuffer at the same time gives his patients a diet of soup, fish, flesh, vegetables, and wine.

These observations, Dr. Meyer remarks, correspond with the statements of Torti in 1709; and of Piorry and Bretonneau in 1845; and Bittner in 1850; also with the results of his own experience in six cases in which he had adopted the same treatment. Furthermore, from the end of November, 1850, to the first of January, 1851, twenty-eight soldiers suffering from intermittent fever were treated with quinine in ten-grain doses, given from five to ten hours before the paroxysm; in these cases the fit was arrested: a nutritious diet of meat and beer was supplied. Of these twenty-eight cases, none were quotidian, three were tertian, and twenty-five were quartan agues. The duration of the disease had varied from a fortnight to eighteen months. The patients had most of them previously taken quinine or arsenic without benefit. Eight of these patients had resided in the fortifications at Posen, which are situated at a high elevation, but deficient in light and air; they had the quartan form of the disease, and had received no benefit in the military hospital: in all, without exception, the spleen and liver were enlarged; these individuals exhibiting an anæmic, cachectic aspect, with sallow complexion, and œdema of the face and ankles. The prognosis in these cases was most unfavourable; but the attack was suppressed by the ten-grain doses of quinine for eight, fourteen, twenty-one, and twenty-eight days, until at last the health was perfectly restored by the subsequent employment of ammoniated tincture of iron, a liberal diet, and fresh air.

Of the remaining twenty cases, three were tertians, which severally had existed fourteen days, three weeks, and three months; thirteen were quartans, of which two had lasted two months; four three months; one twelve months; one eighteen months; these were cured by a single dose of ten grains of quinine: one quartan of

three weeks' duration, and one of four months' standing, were cured by a second dose. Two cases remained rebellious; one, that of a pale, feeble individual, with splenic disease; the other, a robust man, with only moderate enlargement of the spleen. Among the sixteen who were cured by the first dose of ten grains, two were remarkable; one was a strong, healthy-looking man, who had had the disease eighteen months, with slight enlargement of the spleen: the usual effects followed the administration of the large dose of quinine, and so far were evidence of perfect cure; at the same time that painful dragging of the limbs, from which he had suffered during the entire progress of the disease, suddenly disappeared: and the other, a patient in a lax, anæmic condition, which had existed for twelve months, with an enlarged liver, and a spleen more than seven inches broad. It was for the treatment of the latter disease that the patient had been consigned to the hospital. A full dose of quinine, with liberal diet, had suppressed the fever during the time that he remained in hospital, and had effected a diminution of the spleen. The cure was permanently effected by a full diet, and the internal use of iron.

Dr. Meyer concludes, as the result of his observations, that Dr. Pfeuffer's plan of giving a single large dose of quinine, although not uniformly successful, is successful in the majority of cases of uncomplicated quartan ague where no special endemic influence or altered condition of the blood interferes. The subsequent employment of iron as a medicine, and a nutritious full diet, secures the continuance of the benefit. The statement of Dr. Pfeuffer, that no ill effects follow the use of a large dose of quinine, is also confirmed by Dr. Meyer.—*Casper's Wochenschrift.* X

THE DIFFICULTY OF BREATHING FROM AN OVERDOSE OF OPIUM RELIEVED BY INHALING THE VAPOUR OF WATER.

THE difficulty of breathing commonly met with in cases of poisoning with opium, is generally ascribed to paralysis of the respiratory muscles caused by the drug; but Dr. C. W. Wright ascribes it (*Western Lancet*, Jan. 1851) to the dryness of the mucous membrane of the lungs, caused by the opium.

"It is absolutely necessary," he remarks, "that the mucous membrane of the lungs should be kept constantly moist, otherwise it is impossible for oxygen gas to be absorbed, and carbonic acid eliminated. It is observed, in some cases of poisoning with opium, that the mouth and fauces become so dry that it is almost impossible

for the patient to swallow or speak, and that if the dose is sufficiently large, this dryness may extend into the respiratory organs, and thus give rise to great difficulty of breathing. In these cases the patient is not so much disposed to sleep as when this system is not observed.

"Having seen this effect of opium in several cases, I had determined to try the effect of the inhalation of the vapour of water in mitigating the unpleasant symptom thus induced. This I was enabled to do in my own case, a short time since, from having taken by mistake an overdose of opium, which could not have been less than ten grains. In this instance, the first warning of the mistake I had committed was embarrassed respiration, which soon amounted to an agony, without the least symptom of narcotism. In this case much the same sensation was produced by each inspiration as is experienced by the inhalation of pure nitrogen gas, the air seeming to leave the lungs without having performed its functions, there being at the same time a sense of dryness in the fauces and larynx. In this condition I commenced breathing the vapour of hot water, which produced immediate relief. After this, having ejected the poison from the stomach by an emetic, no unpleasant effect followed.

"When it is remembered that the power which a membrane possesses of absorbing a gas is in proportion to its moisture, and that a dry one is as impenetrable to gases as horn, it is not surprising that the above symptoms should be induced by opium, which, above all other substances, has the property of diminishing the secretion of the mucous membranes. It should also be borne in mind that, by arresting the pulmonary secretion, the blood loses its attraction for the mucous membrane lining the lungs.*

"Probably the best treatment which could be adopted, where this symptom is observed, would be to allow the patient to inhale the nitrous oxide gas saturated with vapour, which would have the effect of restoring the moisture of the lungs, and presenting oxygen in a much more soluble form than that which enters into the composition of the atmosphere."—*American Journal of the Medical Sciences*.

CASE OF ANGINA GANGRÆNOSA. BY DR. HENRICH, OF MENTZ.

THE following case is worthy of note as having occurred independently of typhus, scarlet, or other fever, of metastasis, or constitutional derangement of any kind.

G. R—, twenty-six years of age, a coachman, of an active and strong frame, of a choleric temperament, the son of a healthy countryman, who had reached an old age; had, previously to the present attack, enjoyed good health: he had at this time been five days married. After having for two days difficulty in swallowing, and the sensation as of a foreign substance in the throat, he had been compelled, in his duty as a coachman, to sit for several hours in a pouring rain. When he reached his home in the evening he experienced severe rigors, followed by extreme heat, with dry burning skin, intolerable thirst, increased dysphagia, and a sleepless night.

Dr. Henrich saw him for the first time on the 11th of October, when he found him complaining of pain in swallowing, constant hawking of tough secretion, which excited frequent coughing: his voice was hoarse and hollow, articulation indistinct. Breathing was free; a deep inspiration did not cause pain. Examination of the mouth, which was effected with difficulty, showed the tonsils to be much swollen, especially that on the right side; the mucous membrane of the mouth was of a dark red colour, and covered with tough white mucus. The tongue was covered with a thick white fur. To open the mouth gave him great pain. He complained of pain and noises in the right ear, and of impaired hearing on the same side, whence it appeared that the inflammation had extended to the Eustachian tube. There was a degree of fever: pulse 90. The treatment adopted was leeching, saline purgatives, &c., under which the symptoms improved, the skin freely perspiring, and the bowels having been purged three times. A diaphoretic regimen was ordered.

13th.—Passed a quiet night: pulse 70. Improving generally: no eruption on the skin.

14th.—During the night the relatives had yielded to the patient's urgent desire that he might be washed and have a change of linen. During the proceeding it seems probable that the action of the skin was suddenly checked: all the worst symptoms had returned, and a large swelling had appeared under the left ear in the situation of the parotid and sub-maxillary glands, extending to the cellular tissue along the inferior maxilla; so much interfering with the movements of the jaw, that the mouth could scarcely be opened sufficiently wide to permit a view of the tongue, which was swollen, and covered with a thick coating of yellowish fur. It was impossible to make a further examination of the mouth. Deglutition was excessively painful; speaking difficult and indistinct. The fever was moderate; the pulse 75, and small. A warm

* See Liebig's late work on the motion of the juices in the animal body.

perspiration bedewed the surface of the body. The patient complained of lassitude and weakness of the limbs. The parts were ordered to be fomented with aromatic herbs, and the perspiration to be maintained.

In the evening the swelling had extended upwards above the ear, and downwards as far as the first rib; it was of a peculiar dark red colour, without heat or tenderness on pressure. The patient complained of little pain, had lost all appetite, and could not swallow, so that he seemed likely to die from want of food. He took little notice of what was going on around him, lying by the hour together quite quiet, with his eyes closed, apparently asleep. He had but little thirst; the bowels were open; the pulse 75, and weak. The fomentations were ordered to be continued, and infusion of valerian, with *Aq-oxy-muriatica*, to be taken internally.

15th.—The swelling had extended; the integuments were detached from the parts beneath, and of a livid hue; the swelling was free from pain, and had a doughy feel. The patient had passed a sleepless night, with much thirst, and pain in swallowing; the speech scarcely intelligible; confusion of mind; a state of prostration, alternating with momentary paroxysms of excitement. A foul bitter taste in the mouth, constant nausea, offensive odour in the breath; three loose fetid stools; thick deep red urine; profuse sweating; small, feeble, frequent pulse. Camphor to be added to the fomentations and to the medicine; animal broths to be given.

16th.—Had been so delirious in the night that he could be kept in bed only by force. It was next to impossible to get either medicine or nourishment swallowed. The swelling had extended to the left breast, was of a livid hue, and felt soft and fluctuating. While making the examination, several small apertures appeared, whence issued a dark fetid fluid, giving very great relief, and causing diminution of the swelling. The remedies were continued, and wine was added. The patient died comatose on the following evening.

On examination of the body, the parts already indicated as the seat of the disease were found as follows:—Under the integuments of the neck and platysma myoides, corresponding to the fascia covering the neck and upper part of the thorax, was found an irregular cavity burrowing deeply among the muscles and vessels, the walls of this cavity being covered with a greenish-brown deposit; it contained shreds of sloughing cellular tissue, and granules of fat. There were no traces of inflammation—*e. g.*, hyperæmia and exudation—but the morbid processes seemed to have consisted in a

spontaneous gangrene of the cellular tissue and fascia of the neck, by which the most extensive destruction of the parts had taken place.

That the disease had begun in the cellular tissue was rendered probable by the distinctness with which the several structures were dissected out: thus the acini of the parotid gland hung detached from each other. The muscles were covered with the same dark-coloured substance, but internally retained their normal characters. The sub-maxillary gland was also detached from its connections, but was healthy in its structure. The inferior maxilla was denuded of its periosteum. The nerves and vessels were dissected out, and passed freely across the space. The mouth and fauces presented nothing abnormal. The left tonsil was swollen and somewhat discoloured, but otherwise not changed in appearance. The follicles at the root of the tongue and in the pharynx were distended with dark secretion. The mucous membranes of these cavities, as well as the trachea and bronchi, were covered with a yellowish mucus. The lungs were loaded with blood and serum. The heart was flaccid; in the right cavity there were dark coagula, in the left dark-coloured blood. All the large vessels were discoloured by imbibition. The intestines were distended with gas. The glands and abdominal viscera were congested with dark-coloured blood.—*Casper's Wochenschrift*.

X

*** Was the treatment in this case sufficiently supporting and stimulating?

SCIRRHOUS TUMOUR OF THE RECTUM AND BLADDER.

DR. J. M. WARREN exhibited a specimen of scirrhus disease of the rectum, and stated the case, which was as follows:—The subject was a gentleman fifty-six years old. Nineteen years before, he had been operated on for the piles, and at that time a small hard tumour was discovered near the anus, which he declined having interfered with. He has occasionally had attacks of pain in bowels and indigestion, but never any serious symptoms in the rectum. He has always had diarrhoea since. About a year ago, Dr. W. was called to him on account of a retention of urine, and on an examination being attempted per anum, it was found that the rectum was obstructed by a scirrhus mass, which prevented the introduction even of the little finger. The retention was gradually overcome by the use of the catheter in the course of a fortnight, and the patient has had moderately good health during the summer. Two months since, Dr. W. was called to him

with a second retention, which gave way to remedies without the use of the catheter. It was, however, shortly followed by a universal dropsical effusion, and the patient gradually sank exhausted.

On examination, the last four inches of the rectum were found precluded by a scirrhus mass, leaving in the centre a narrow pathway for the fæces. The disease had extended to the bladder and urethra, so as to encircle the tumour and apparently to implicate what has been called the middle lobe of the prostate gland, which projected into the bladder and occupied about a third of the cavity.

Owing to the loose state of the bowels, this patient had been able to live for nineteen years with this tumour, and suffered but little inconvenience from it, and in fact was not made aware of its existence by any pain or other sensation, unless by an occasional irritation of the skin in the neighbourhood, on account of the imperfect manner in which the evacuations were controlled.

The left kidney was in a high state of inflammation, and there was some purulent deposit in the pelvis of that organ; the ureter was not extraordinarily distended.

It might be stated that, during the last week of his life, he refused food entirely, on account of the difficulty and pain in swallowing, caused by an inflammation in the fauces. Very severe hiccough ensued, which was mitigated, and the last part of his life made easy, by the use of chloric ether administered from time to time on a sponge by the nurse, as occasion required. — *American Journal of the Medical Sciences.*

BOOKS RECEIVED FOR REVIEW.

- The Principles and Practice of Obstetric Medicine and Surgery in reference to the Process of Parturition, &c. By F. H. Ramsbotham, M.D. 3d Edition. On the Classification and Management of Criminal Lunatics. By J. C. Bucknell, M.B.
- Guy's Hospital Reports. Vol. 12, Part 2, November 1851.
- Follies of the Nineteenth Century. Bolton. London Journal of Medicine. December.
- The Dublin Quarterly Journal of Medical Science. No. 24, November 1851.
- Edinburgh Monthly Journal of Medical Science. December 1851.
- Pharmaceutical Journal. December 1851.
- Comptes Rendus. Nos. 18 et 19, 3e et 10e Novembre 1851.
- Journal de Chimie Médicale. Novembre 1851.
- Casper's Wochenschrift für die gesammte Heilkunde. Nos. 39 to 43, 27th September to 25th October, 1851.

Henke's Zeitschrift für die Staatsarzneikunde. 4te V. H. 1851.

AMERICAN JOURNALS.

- Boston Medical and Surgical Journal. October 1851.
- Philadelphia Medical Examiner. September 1851.
- The Stethoscope and Virginia Medical Gazette. Vol. 1, No. 31, Sept. 1851.

BIRTHS & DEATHS IN THE METROPOLIS During the Week ending Saturday, Nov. 29.

| BIRTHS. | | DEATHS. | |
|-----------|-----|-----------|-----|
| Males.... | 772 | Males.... | 626 |
| Females.. | 769 | Females.. | 653 |
| 1541 | | 1279 | |

CAUSES OF DEATH.

| | |
|--|------|
| ALL CAUSES | 1279 |
| SPECIFIED CAUSES | 1275 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 252 |
| <i>Sporadic Diseases, viz.—</i> | |
| 1. Dropsy, Cancer, &c. | 54 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 125 |
| 4. Heart and Bloodvessels..... | 63 |
| 5. Lungs and organs of Respiration | 298 |
| 6. Stomach, Liver, &c. | 58 |
| 7. Diseases of the Kidneys, &c. | 15 |
| 8. Childbirth, Diseases of Uterus, &c. | 14 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 8 |
| 10. Skin..... | 2 |
| 11. Premature Birth..... | 0 |
| 12. Old Age | 53 |
| 13. Sudden Deaths..... | 9 |
| 14. Violence, Privation, Cold, &c.... | 37 |

The following is a selection of the numbers of Deaths from the most important special causes

| | | | |
|--------------------|----|------------------|-----|
| Small-pox..... | 37 | Convulsions..... | 34 |
| Measles..... | 21 | Bronchitis | 134 |
| Scarlatina | 38 | Pneumonia | 123 |
| Hooping-cough | 34 | Phthisis | 161 |
| Diarrhœa..... | 23 | Lungs | 5 |
| Cholera..... | 0 | Teething | 5 |
| Typhus..... | 50 | Stomach | 4 |
| Dropsy | 25 | Liver..... | 11 |
| Hydrocephalus | 34 | Childbirth | 7 |
| Apoplexy | 33 | Uterus | 3 |
| Paralysis | 28 | | |

REMARKS.—The total number of deaths was 236 above the average mortality of the 48th week of ten previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 29.69
 Thermometer^a 35.8
 Self-registering do.^b Max. 0.0 Min. 22.
^a From 12 observations daily. ^b Sun.

RAIN, in inches, .20. — Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was nearly 4° below the mean of the month.

NOTICES to CORRESPONDENTS.

- Mr. Solomon's paper has been received. We will reserve it for the present, and send the author a private communication.
- Dr. J. Bird's request has been attended to.
- The papers of Dr. Jones and Mr. Richardson shall appear next week.
- The Draft Supplemental Charter of the Royal College of Surgeons reached us too late for publication or comment in this week's number.

Lectures.

NOTES OF

CLINICAL LECTURES,

Delivered at Guy's Hospital.

BY JOHN HILTON, ESQ., F.R.S.,
Surgeon to the Hospital.

(Reported by MR. F. W. PAVY.)

Traumatic Brachial Aneurism (continued).

IN my last lecture, gentlemen, I placed before you some of the particulars of a case of aneurism, which has been engaging our attention in the clinical wards. I proceeded with the report of the case, until we arrived at the death of our patient, and, as far as lay in my power, gave an analysis of the most important and leading symptoms. It now remains for me to detail to you the post-mortem appearances, and conclude the remarks which I have to make on the case.

Inspectio cadaveris, 34 hours after death.

—The cuticular covering of the abdomen presented no abnormal appearance; but, on making the usual median incision, for the purpose of examining the contents of the abdomen, a large quantity of extravasated blood was observed in the subcutaneous cellular tissue, the substance of the recti muscles, from the umbilicus to the pubes, and along the right spermatic cord. Both recti muscles were much lacerated, and the right one almost torn across, about midway between the umbilicus and pubes.

This appearance of the deep abdominal parietes was evidently produced by some serious external violence. Such an extensive lesion could not have been effected by merely muscular contraction in the last struggles between life and death; and, as we were entirely ignorant of his having received any injury to account for it, I felt it my duty to make the most strict enquiries on the subject. It appears, a night or two before his death, he got out of bed in a delirious state, and whilst the attendants were assisting him, he fell, so that the edge of the iron bedstead struck the lower part of the abdomen: a cause quite sufficient to account for the injury sustained, and the appearances observed.

The neck was swollen and puffy, but not œdematous. On the left side of it, infiltrated into the cellular tissue, and amongst the muscles and vessels, beneath the deep cervical fasciæ, was a considerable quantity of

thin purulent matter, which extended also beneath the fascia, across to the opposite side. It presented no appearance of a defined abscess, but consisted of a general purulent infiltration.

You will remember I adverted to this subject at last lecture, and told you that we noticed during life a diffused swelling, with redness, in front of the lower part of the neck; and that the cause, whatever it was producing it, was situated behind the muscles, which were pushed forward by it. The swelling gave no evidence of fluctuation, or I should have at once opened it; from the conviction, that in these cases, whenever a purulent deposit is discovered, the sooner it is opened the better. Before his death, this swelling in part subsided; not entirely so, however, for his neck remained puffy and full, as observed on the post-mortem table. When suppuration occurs, and there is a sufficient amount of constitutional vigour present to lead to the production of an abscess, an effusion of coagulable lymph takes place around the newly-formed matter, and, organizing, forms a membrane—pyogenic membrane—which encloses it, as a sac or cyst, and thus prevents the entrance of the pus into the general system. In this case, however, we have seen, there was a general infiltration of pus amongst the tissues, and no attempt even, at the formation of a wall, to define or circumscribe it; which is a striking evidence of the low ebb his vital powers must have attained.

The left lung, at its upper and anterior part, was found adherent to the parietes of the chest by old adhesions; the posterior surface of it was ecchymosed, and attached to the opposite pleura by a layer of recent lymph. The substance of the lung, generally, was congested; infiltrated with bloody serum; its texture easily broken down under the fingers, and in some places gave evidence of recent pneumonia. The right lung also congested, and infiltrated with bloody serum, and its bronchial tubes containing a puriform mucus.

The ecchymosis noticed on the posterior part of the left lung may be looked upon as another evidence of the remarkable state of depression that existed during life. It is a proof of one of two things, either that his fluids were in such an attenuated state as to be capable of passing through the walls of vessels, which had retained them during a state of health, or, that the vessels themselves were so far altered as to allow a transudation of their natural contents to take place.

I have told you that the substance of both lungs was congested; but this is a mere statement of a simple fact; a physical condition often observed, and easily recog-

nised. The question, then, arises: What does this congestion depend on? Does it proceed from œdema taking place during the last few hours of life; or, is it to be regarded as an early stage of an inflammatory affection? This is the point of importance, and a question which is often exceedingly difficult satisfactorily to decide. In both instances, the texture of the lung is infiltrated, heavier than water, free from air, and easily broken down under the fingers; and the only autoptical distinction I know of, is the following:—On thrusting the end of the thumb or finger into the abnormal pulmonary substance, a small pool of fluid immediately collects on its removal; and it is the character of this fluid which must guide you. If the congestion depend on œdema alone, from serous exudation, the result of gravitation; the fluid presents a clear and comparatively transparent appearance; but, if it be the result of inflammation, you will find it muddy, turbid, and opaque: this muddiness or opacity—or more strictly, opalescence—arising from the presence of small quantities of coagulated albumen, fibrine, or purulent matter.

Proceeding with the report. The heart presented no deviation from a healthy appearance. The kidneys; both of them

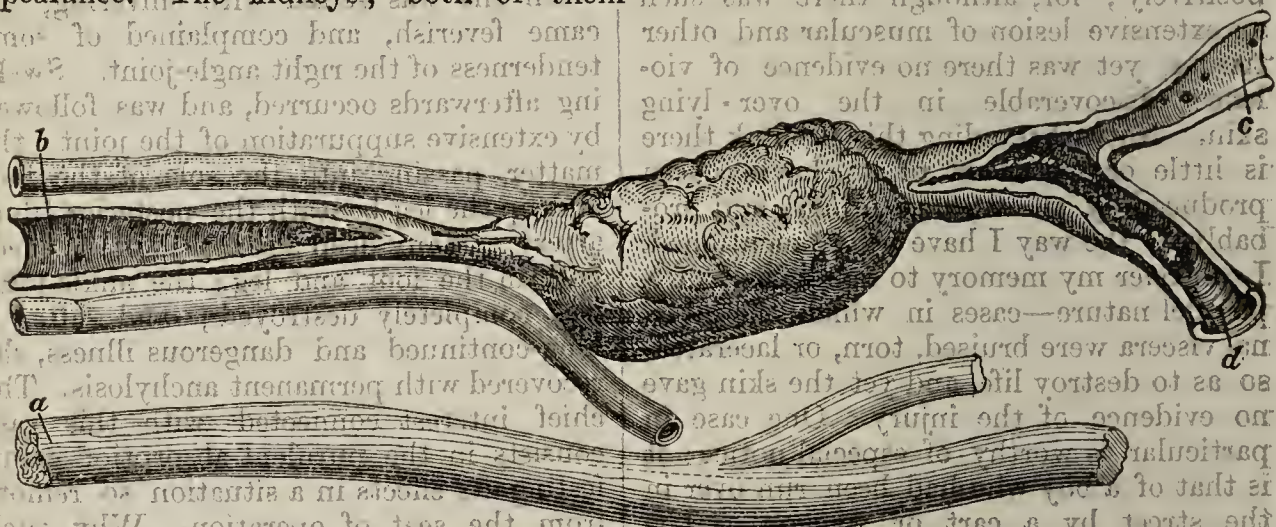
much hypertrophied: nearly double their usual size; and exceedingly congested.

The liver large, mottled on its surface, and its substance congested. Its margin or edge swollen; and much thicker than natural. The lobules, coarse, soft, and very easily broken down by pressure.

The spleen natural in size, soft in consistence; the large intestine healthy; the mucous membrane of the small intestine congested.

The arm presented the following appearance:—A little above the bend of the elbow, and over the position of the brachial artery, was the wound resulting from the operation, in a granulating condition; an inch to its outer side, the cicatrix of the original puncture, leading to the aneurismal cavity, which was in a state of suppuration; and, about two inches below the elbow, was an opening, which had been made with a lancet, into a superficial abscess.

This drawing, which has been placed on the table, and which I shall hand round to you, has been taken by our artist, Mr. Tupper, from an actual dissection of the parts. It explains itself, and will give you a more accurate idea of the relation of the aneurism to the artery than a verbal description from me.



a, Median nerve; *b*, brachial artery; *c*, radial artery; *d*, ulnar artery.

It was observed, on dissection, that the radial artery was pervious throughout, but that the ulnar was completely obstructed at its upper part, as you will find represented in the drawing. This explains a circumstance that was noticed during life with respect to these two arteries at the wrist; pulsation being apparent in the one, and not in the other.

I adverted at last lecture to the diarrhoea which the patient at one time suffered from, to a considerable extent; I put forward the question of the propriety of checking a diarrhoea when there is a suspicion of its being the result of purulent absorption. Considering the simply congested state of the small intestine observed

amongst the post-mortem appearances, I think now it would have been unadvisable to have adopted active measures to repress it, unless it had proceeded to such an extent as in this way to have endangered the life of the patient. In some diseases, we frequently observe nature making an evident effort to rid herself of the poison, whatever this may be,—which oppresses her, in the form of a discharge from one or other organs of the body, which is termed a crisis or critical discharge. Knowing this, we can easily conceive the mischief that might accrue from unduly interfering and thwarting nature in her intentions; but, on the other hand, the extreme depressing influence of a severe discharge

must not be overlooked; neither must it be forgotten that this drainage from the system might proceed to such an extent as of itself to kill the patient. These cases, therefore, require the exercise of a considerable amount of judgment and discretion: on the one hand, to see that you interfere as little as possible with the apparent object of nature; on the other, to take care that you do not let your patient slip through your hands in pursuing this course.

The laceration of the recti muscles, with effusion of blood into the surrounding structures, which I have before alluded to, is an incident of some interest; and, in another case, might have been of considerable importance in a judicial point of view—namely, as to whether it took place during life or after death; or whether it was produced by muscular contraction, or the result of external violence. The first question in this instance is at once cleared up by the fact that the lacerated ends of the muscle were retracted and covered with lymph; for it is impossible that lymph could be thrown out, except under the influence of vitality. The other is a point about which it is necessary to speak less positively; for, although there was such an extensive lesion of muscular and other tissues, yet was there no evidence of violence discoverable in the over-lying skin. Notwithstanding this, I think there is little or no doubt of its having been produced by an external injury, and probably in the way I have before mentioned. I can refer my memory to many cases of a parallel nature—cases in which the internal viscera were bruised, torn, or lacerated, so as to destroy life, and yet the skin gave no evidence of the injury. One case in particular is worthy of especial notice: it is that of a boy who had been run over in the street by a cart or waggon. The wheel passed over his abdomen, and lacerated one of his kidneys. A severe hæmorrhage ensued, and the boy died. No trace of any external violence could be discovered on the exterior of the abdomen. I have seen instances of lacerated muscle produced by their own spasmodic contraction—chiefly, however, in that awful disease, tetanus; but I do not think we could have such an extensive effusion of blood into the surrounding cellular tissue as was observed in the case before us, if it were simply the result of muscular effort: at least, it is not in accordance with my experience to find it so.

It might be asked, how did the purulent matter which was observed infiltrating the deeper tissues of the neck, get there? I think there can be little doubt that it

produced by the absorption of pus in the neighbourhood of the wound. But why nature chose the cervical region to manifest these effects in, is a question which cannot be answered satisfactorily; although I may remind you, for the purpose of a possible explanation of cause and effect, of the close proximity of the termination of the lymphatics of the upper extremity to the purulent depôt. As yet, however, no satisfactory explanation has been given of the peculiar position of secondary accumulations, or formations of purulent or puruloid fluid after wounds or operations. I remember, some years ago, seeing the inspection of a man who had died after amputation of the right thigh. This man, it was thought, had purulent absorption; and, at the examination, purulent fluid was found in all the joints on the left side of his body, and none at all in those of the right side. Three years since, I removed from the face of a young lady, ten years old, a small, suspicious-looking glandular tumour, situated on the left side, and near the facial artery, in its course over the inferior maxillary bone. The patient was kept perfectly quiet in bed, and everything went on favourably till the fourth day, when she was seized with shivering, became feverish, and complained of some tenderness of the right angle-joint. Swelling afterwards occurred, and was followed by extensive suppuration of the joint: the matter passing into the sole of the foot and up the leg beneath the posterior tibial artery. Many deep abscesses were opened, both in the foot and leg; the ankle-joint was completely destroyed; and, after a long-continued and dangerous illness, she recovered with permanent ankylosis. The chief interest connected with this case consists in the purulent absorption manifesting its effects in a situation so remote from the seat of operation. Why such manifestation took place, as it were, by selection, in the ankle-joint, is a point on which I am completely unable to enlighten you. Could I have foreknown the extent of purulent infiltration which was discovered at the inspection of the man whose case we are investigating, I should have most decidedly felt myself justified in making an opening for its escape; notwithstanding the risk and danger such a proceeding would have incurred, from its great depth below the surface, and the numerous important parts located in its vicinity.

There was not the slightest indication, by any of the symptoms which he manifested during life, of the existence of phlebitis; nor did the post-mortem examination reveal any. We were, however, on the look-out; and, I may say, almost daily

anticipating some evidence of this disease; from the fearful extent to which it has lately appeared in our surgical wards, laying waste our most promising operations, and this, even, at a time when they appeared fast approaching a state of convalescence. In this case, I say, no trace of such disease could be discovered; but we have indubitable evidence of his system having been contaminated with a poisoned blood, as well from his symptoms during life as from the numerous ecchymoses found on his internal organs after death.

Reflecting, then, on the whole facts of the case, and adding the information derived from the post-mortem examination to the symptoms observed before death, I honestly confess, I think it would have been a more advisable plan to have opened the aneurismal sac at the primary operation. It was, however, a case of a peculiar nature; and my reasons for not doing so I have already stated to you on a former occasion. To find the aneurismal sac situated behind the artery, as was the case in this instance, is an occurrence of great rarity. When situated in front of the artery, it is plain-sailing practice always to lay open the sac, see where the blood comes from, and place a ligature above and below the opening in the vessel.

Having said all that I think needful to say on the preceding case, I shall occupy the remainder of the time I have at my disposal in adverting to the case of a poor man who is now lying in an almost moribund state, in Luke Ward, and who was the subject of

Popliteal Aneurism.

Hugh Moro, aged 43, admitted into the hospital Dec. 21st, 1850. It appears from his history, that he is a married man, and has followed the occupation of porter or labourer at one of the river-side wharfs, where he was occasionally subject to exceedingly laborious work in lifting and carrying heavy goods. According to his own statement he had enjoyed pretty strong and robust health, and had never been subject to gout or any other illness worthy of consideration, although in former life he was of debauched and intemperate habits,—a fact which his aspect, his red blotchy face and tuberculated nose, at once suggested. No history of any family tendency to aneurism, but his mother, he said, died suddenly at an advanced age, of heart disease. The first indication he received of the disease which has led to his present condition was almost a year ago, when he noticed his left foot and ankle swell and become painful at night, especially after a heavy day's work. Three

months after this he discovered, quite accidentally, whilst one night rubbing his leg, a small lump, about the size of a walnut, deeply situated in the left ham. Said that he did not observe any pulsation in it at first; but, on the other hand, he did not think anything seriously of it, and therefore did not pay much attention to it, as it occasioned him no pain or inconvenience. This tumour, then, which he had noticed nine months ago, remained persistent, and gradually but slowly increased in size. He did not, it appears, attach any importance to it, until a fortnight before I admitted him into the hospital, when it became so painful, and throbbled so violently, that he could not straighten his leg, or walk without much difficulty. From that time he got rapidly worse, and on his admission presented all the ordinary signs of popliteal aneurism. He had a large-sized, deep-seated, pulsating swelling in the popliteal region of the left leg, extending also to the calf, and rendering all the parts around tense and painful. This swelling increased in size by the application of pressure below it; but pressure on the artery above, at the pubes, both arrested its pulsations and much diminished its extent: in other words, the aneurismal sac could be almost emptied of its contents when pressure was made above; but on the removal of this pressure it immediately refilled, occasioning him at the same time a violent painful throbbing sensation. The usual aneurismal bruit was distinctly audible through the stethoscope placed over the tumour. I had him examined by the physicians, but the sounds of his heart were normal, and there was no evidence of the existence of any other aneurism. He was, as I have said, a man who had formerly drank largely and lived irregularly; he was a man whose looks betrayed a debilitated and broken down constitution, and, therefore, one in whom the operation of tying the femoral artery would be exceedingly likely to lead to a serious if not fatal result. It was under this consideration that I determined to try pressure: a plan of treatment which appears to have proved very successful in the hands of some, but which, although often tried, has never yet succeeded in this hospital.

On the 22nd, that is, the day after his admission, I directed that his leg should be placed in a flannel bandage and supported on pillows in an elevated position, so as to diminish the supply of blood to the limb; and at the same time, as he was suffering greatly from pain, I ordered him *Morphiæ Hydrochloratis*, gr. j., *omni nocte hora somni*.

For a fortnight after his admission, during which time an apparatus was being

made for the application of pressure, his symptoms presented little change, and I made no alteration in his treatment with the exception of giving him occasionally an aperient to keep his bowels open. In a short time, however, (Jan. 7,) he became the subject of such intense pain all over the affected leg, that I was obliged, after giving him large doses of opium, which had but a transitory effect in alleviating his suffering, to delay no time in resorting to the method of treatment I had intended to pursue. Accordingly, about 4 P.M. of the same day, the instruments being completed, I adapted pressure on the femoral artery in its course over the head of the femur, by means of an apparatus which was fixed to the pelvis and supplied with an arm, to which the screw for compressing the vessel was connected. The other instrument I placed on the thigh about half way down, so as to maintain constant but alternate pressure by means of the two instruments. When he got tired of the one, to relieve him with the application of the other. A continued attendance was procured from amongst the pupils to change the pressure when required, and to ensure that it was constantly adapted, so as to control, but not entirely arrest, the circulation of blood through the aneurismal sac.

According to the report, I see that the patient was much more easy and composed after the application of the pressure; and that, although only at first able to bear it continuously for an hour in one place, yet, in a short time he became habituated to it, and did not require its alteration oftener than every two or three hours.

On Jan. 12th, as he complained of more pain in his leg, and there was more excitement about his arterial system, I ordered him *Tr. Digitalis mxxv., ex Julepo Ammon. Acet. tertiâ quâque horâ.*

Notwithstanding this medicine, which much reduced his pulse in force and frequency and the most careful and constant attention to the application of the pressure, his leg gradually became more painful, and his suffering so intense, that on the 15th all idea of his being able to continue the compression was abandoned, and the apparatus removed. I much regretted being obliged to discontinue the compression, for were I myself the subject of popliteal aneurism I would rather submit to the application of pressure than the operation of tying, believing that it has proved in many cases a most safe and efficacious plan of treatment, and that many have been cured by it that would have probably sunk under the operation by ligature. In the case before us, from the severe pain the man endured,

which was throughout a prominent symptom of his disease, the application of pressure could not be persisted in, for more than eight days, a time no necessarily adequate to effect a cure of a popliteal aneurism. It would be unfair, therefore, to take this ease as any criterion on the subject.

Two days after the apparatus for compression was removed, the patient was submitted to the operation of tying the femoral artery. There was no difficulty or impediment met with in the operation, which was in every way a plain and straightforward one. The patient immediately after the operation expressed himself as completely relieved of all distress, but in half an hour he was seized with such an intensely agonizing pain throughout the whole leg, but especially in the calf, that it was quite distressing to see him writhing from his sufferings. I ordered him large doses of opium, and by the advice of my talented colleague Dr. Bird, the inhalation of the vapour of chloroform, but it was not till five or six hours afterwards that he obtained relief; and then he began to appear drowsy, and to dose at intervals. What the cause of this severe pain was I am almost at a loss to explain. It could not have resulted from a nerve being included in the ligature, as I was careful to avoid such an occurrence, and he was quite free from pain during half an hour after the operation, a fact inconsistent with the possible inclusion of a nerve within the ligature. Again, the pain was distributed all over the leg, but especially severe in the calf, which receives its nervous supply from the great sciatic, a nerve far remote in position from the femoral artery. I think, therefore, there is most probability that it resulted from some cause or condition which existed previous to the operation.

On recovery from the paroxysm of pain which I have just noticed, his symptoms assumed a favourable aspect for the first few days succeeding the operation, and he has not since had a recurrence of his suffering. Other symptoms, however, have occurred which but too plainly predict the serious, nay, hopeless nature of his case. His pulse from being quiet is now quicker and more feeble; his tongue, at first moist and clean or only slightly furred, is now brown and dry; his skin sweats profusely; his brain is no longer undisturbed, but affected with delirium: the wound is unhealthy in appearance, and for some days past has presented no sign of reparative action. The aneurismal sac, at first presenting a favourable appearance, grew harder and diminished in size, but afterwards got softer and contained a quan-

which I evacuated by means of a lancet. In addition now to all his other symptoms, his foot is blue and cold, and he has commencing gangrene of the leg, which, if he do not previously die of secondary hæmorrhage, will inevitably lead to his dissolution.

* * The patient lived a few days longer, and then died. The gangrene spread from the foot and reached more than half way up the leg, and was accompanied with the formation of numerous vesicles containing an offensive bloody serum. Several of his joints became tender and painful; his pulse extremely quick, feeble, and irregular; his respiration encumbered with bronchial râles, and his expectoration tinged with blood. Frequent twitchings of the muscles of the head and upper extremities occurred; consciousness entirely left him, and in this state he died.

The autopsy disclosed purulent fluid in his left shoulder and knee joints, accompanied with a general phlebitic state of the system. The ligature placed on the femoral artery at the operation still remained, not having separated during life.

After death the limb was injected with coarse injection. The femoral artery was found pervious to within about an inch of the part to which the ligature was applied, but had become abruptly smaller at the point of separation of the profunda from the trunk. The profunda artery had acquired increased dimensions, and the same may be said of its terminal branches, especially those ramifying in the vastus externus and flexors of the knee-joint, where a complete anastomosis became established between the popliteal and femoral arteries through the medium of branches derived from the former of the two. The femoral artery below the position of the ligature was occupied by injection acquired through the anastomosis already adverted to, so that the neighbourhood of the knee-joint was exceedingly well supplied with blood. Below the knee the limb was gangrenous, and the bloodvessels impervious. The branches of the gluteal and ischiatic arteries were somewhat entity of dark gumous offensive material, enlarged. The aneurism was found connected with the popliteal artery, and situated behind the knee-joint in the popliteal space. The whole limb has been preserved, and a dried preparation made of it, which has been placed in the pathological museum of the hospital.

Original Communications.

REMARKS ON THE FIBRINOUS ELEMENT OF THE BLOOD IN RELATION TO DISEASE.

BY BENJAMIN W. RICHARDSON,
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(Read before the Medical Society of London,
November 15th, 1851.)

Physiological facts which bear upon the subject—Changes of fibrine during disease—Increase, relative and real—Influence of respiration on the fibrinous element—Extraordinary increase of the fibrinous element in pulmonary inflammations—Cause of the increase of fibrine in inflammation, and of the excitement called inflammatory fever—Experiment—Diseases in which fibrine is relatively increased—Venesections—effects of, on the fibrinous element—Scurvy—Decrease of fibrine—causes of—from excessive fatigue—Effects of remedies—of mercury, of saline medicines, of alcohol—Fevers—divisions of—typhus, treatment in—Change of character of the fibrinous element—Coagulation during life—causes of—cases—Sudden formation of solid masses of fibrine in the heart—Valvular disease during rheumatism—Epidemics of fibrinous polypi—Chronic fibrinous concretions—effects of, on life.

THE subject of the paper which I have the honour to present to the Society this evening is of considerable importance; it is, moreover, a subject of great extent, and one to do justice to which would require a lengthened series of papers. While, therefore, I shall be prevented from want of time to give the subject the due consideration it deserves, I shall, I trust, be enabled to bring forward sufficient matter to excite discussion for the evening.

As the subject I propose to discuss involves the consideration of fibrine in a pathological point of view only, I shall, as a matter of course, reject those subjects which pertain purely to the physiology of this important constituent of the blood—such as the questions whether it be an element for nu-

trition or an excrementitious substance? whether formed from albumen or blood-corpuscles? whether it is a product first produced in the vegetable world, and is afterwards transferred wholesale, if I may be allowed the term, into the animal body, according to the Liebig school; or a substance elaborated and perfected in the living body, as others assume? These subjects, I repeat, I do not intend now to touch upon. At the same time I must intimate that I shall not fail to make use of those physiological facts which directly bear upon the pathology of fibrine, whenever I find that the recital of such facts will assist in elucidating obscure parts of my subject.

To proceed, then, it is necessary for me, in the first place, to assume the presence of fibrine in healthy blood, and to fix its amount, at a certain standard; for which purpose I shall select the figure derived from the mean analysis of Lecanu—namely, three parts in a thousand, as being at once the most simple and correct estimate. I must also state the fact that animal fibrine, however formed originally, is indisputably brought to perfection in the living body. Thirdly, I must also refer to the circumstance that in health the fibrine is held in solution by the serum, and perhaps by the salts of the blood, and that, in all its course through the body, it is associated with a pretty constant quantity of albumen. And lastly, I would direct particular attention to the fact that, even in health, the proportion of fibrine in the body is continually undergoing slight changes: sometimes a real change, by virtue of a decrease or an increase in itself; and at other times an apparent or relative change only, arising from corresponding alterations in the other constituents of the blood.*

The fibrinous element of the blood during disease may undergo distinct changes in quantity and in quality.

1stly. It may be increased.

2dly. It may be decreased.

3dly. It may be altered in character.

On each of these changes I wish briefly to treat; and I proceed by taking up *increase of fibrine*.

In the first place, then, it is interesting to observe that on no occasion does an

increased quantity of the fibrinous element appear in the blood without being attended with a decrease in some other important constituent. Thus, as Simon shews, in almost all diseases of an inflammatory kind, where there is an increase of fibrine, there is at the same time a decrease of blood-corpuscle.* In other diseases, again, the increase of fibrine is attended with a decrease in the albumen, and so on. In all cases there is rarely, if ever, increase of fibrine with a coincident normal proportion of the other constituents of the blood.

Our knowledge of the metamorphoses which the blood undergoes is not, I regret to say, sufficiently clear to show us why this relative change in the different proportions of the blood should ensue. But the fact is not the less worthy of note, inasmuch as it testifies how very dependent each element of the blood is upon the others, and how careful analytical observers ought to be before they decidedly conclude that a separate constituent of the blood is either lessened or increased in quantity.

But admitting the full force of this remark, it must at the same time be allowed that the fibrinous element of the blood is capable of undergoing increase; and it becomes interesting, therefore, to inquire what are the circumstances which lead to such an increase.

As our knowledge on the subject is extremely scanty, I shall not enter upon many speculations with reference to the effects which a disordered state of the eliminatory processes of the body may have in altering the conditions of the fibrinous element; but I pass on to observe that it is now fully demonstrable that the respiratory act is intimately concerned in the formation of fibrine, and that the proportion of fibrine in the body is increased or decreased in proportion to the amount of oxygen imbibed in respiration. Thus, by the beautiful series of experiments lately performed by Dr. Gairdner, it has been proved beyond doubt that the blood of animals which have been exposed to an oxygenised atmosphere soon becomes highly charged with fibrine;† and the fact is still further borne out by the experiments of Pre-

* For observations on this subject, see Simon's *Animal Chemistry*, Vol. i. p. 247, Sydenham Soc. edit.

* *Animal Chemistry*, Vol. i. p. 247.

† Gairdner on Gout, 2d edit. p. 152.

most and Dumas,* and by the more recent ones of Nasse and Poggiale, which show that in those animals whose respiration is most active—such as birds—the temperature is not only higher, but the amount of fibrine is very much greater, than in other creatures.† While, on the other hand, the observations of Dr. John Davy prove that in all cases where death is induced by any process which deprives the lungs of atmospheric air—as in death by hanging, by fumes of charcoal, or by effusion of blood into the bronchia and air-cells—the blood remains destitute of the property of coagulation, “either from deficiency of fibrine, or from an alteration in the quality of that substance.”‡ This being the fact, then, it is by no means difficult to discover how it is that in some diseases the fibrinous element shall be in excess. We may not be able to prove, perhaps, that a highly oxygenised atmosphere ever produces such a state; but we can prove the existence of a condition in which the respiratory acts are so abnormally increased as to cause a greater exposure of the blood to the atmosphere than is consistent with health; under which circumstance there requires but one condition—viz. sufficient rest, to prevent an equivalent waste of fibrine, and then we may naturally enough expect to find an increase of this element in the circulating fluid—and this, indeed, is just what is found to happen in practice. In no diseases have we the fibrinous element of the blood so increased as in the first stages of inflammatory affections of the lungs. Thus in pneumonia, according to an analysis of Rindskopf, the fibrine may be increased to as high a figure as 12 parts in the 1000,§ and in pleuritis to 5 to 6.

Bronchitis, again, affords both positive and negative evidence of the fact in question, since, from the analyses of Andral and Gavarret, it would appear

* Ann. de Chimie, tome xxiii.

† See also Metcalfe on Caloric, Vol. ii. pp. 649-651.

‡ Davy's Researches, Anatomical and Physiological, Vol. ii. p. 192 and 193.

§ It must be admitted that the increase of fibrine here noted is an exceptional example, inasmuch as in ordinary cases of pneumonia the fibrine only rises to 6, 7, 8, and rarely to 10, parts in the 1000. The person from whose blood Dr. Rindskopf obtained this analysis was a man 60 years of age, who was suffering from bronchopneumonia. The blood was taken shortly before death. The full analysis is given in Simon's Animal Chemistry, Vol. i. p. 262.

that while in the first stages of this disease, when a large quantity of blood is exposed too frequently to atmospheric influences, the fibrine is increased to a high figure, to 6, 7, and even 9 parts in 1000. In the later or chronic stages of the disease, as mucous secretion is poured out upon the bronchial membrane, thus diminishing the directness of communication betwixt the blood and the atmosphere, the fibrine falls to its normal standard, or even below it.

But the great increase of fibrine in the blood, thus accounted for in the inflammatory affections just named, is not so easily explained in other cases—viz., in those inflammations where the respiratory movements are not at all concerned.

The above explanation accounts for the *extraordinary* increase of fibrine in pulmonary inflammations, but it does not account for the ordinary increase of this element, which is found in, I may say, *all* inflammatory affections.

The questions, in fact, concerning the increase of fibrine in inflammation, and the origin of what is called the accompanying inflammatory fever, are well worthy of thoughtful discussion; for, as far as I am aware, they have been as yet satisfactorily answered by no one.

Dr. Frantz Simon has attempted the matter, it is true, and has opined that the reaction which follows the setting in of inflammation quickens the circulation, and then more blood being exposed to the respiratory process, an increase of fibrine is the result.* Now, with all due deference to this illustrious chemist (and no one admires his immense labours, or deploras his untimely death, more than myself), I must say, that to me the hypothesis appears quite untenable,—1st. Because there may be inflammation and increase of fibrine without any preceding depression or reaction consequent on it. 2d. Because it is more than probable that the quickened circulation, which marks what is called reaction in inflammatory states, is the effect of an increase of fibrine, and that consequently such increase does not follow, but precedes the process of reaction. And, indeed, this supposition is quite in accordance with the views of Simon himself, expressed in another part of his great work.

After all, however, it is impossible to

* Animal Chemistry, Vol. i. p. 284 to 286.

say positively that such is the case; but it can be stated as a thoroughly ascertained fact, that an increase of fibrine is always to be found simultaneously with the appearance of symptoms of inflammatory excitement, if not previously.

I find the question now before us very fairly put forward by our justly distinguished countryman, Mr. Wharton Jones. Does the inflammation, asks he, cause the fever, and the fever the increase of fibrine? or does the inflammation cause the increase of fibrine, and this increase the fever?*

I state my own opinion of this matter by observing that to me it appears that the inflammatory process gives rise to the increase of fibrine, and this to the attendant excitement which we call fever.

I am the more inclined to this opinion, because, in repeating some of the experiments of Dr. Gairdner, to which I have before alluded, not only have I found the amount of fibrine remarkably to increase, but I have also observed, that in proportion as the blood becomes fibrinized, symptoms precisely similar to those which characterize inflammatory fever present themselves. This in one experiment was peculiarly marked. A rabbit was put under the influence of oxygen; at the end of an hour the circulation had become greatly quickened, and the external temperature of the body was much higher than before. At the end of two hours the vessels of the ear became much enlarged, and could be seen most distinctly on raising the organ to the light, with all their anastomoses. The vessels were firmly injected with blood, so that very firm pressure on each side of the vessel, made by the thumb and finger, was required to compress it, and to produce an arrest in the motion of the blood through the vessel. The temperature of the body was 102° by a Fahrenheit thermometer. Here, then, were almost all the symptoms which denote in the human subject an inflammatory fever—symptoms appearing most distinctly to follow an increase of fibrine; for, by this time, blood drawn from a vessel in the ear showed a very large increase of fibrinous element.

I have said above that the increase of fibrine is most probably dependent

upon the inflammation. In this I have perhaps said more than may be considered allowable; since it may be supposed that in some forms of inflammation the increase of fibrine may be dependent on the same cause as the inflammation itself. Thus there is a decided increase of fibrine in erysipelas, a disease, as far as I can learn, depending entirely on atmospheric causes. I merely take one example; but I think that the analogy may perhaps be carried out more or less to all others.

I have before alluded to the fact, that there may be increase of the fibrinous element of the blood, not from any real increase in fibrine, but from a diminution in the other constituents, by which in health it is held in solution. This, I think, is shown in a very marked manner in phthisis pulmonalis, where the fibrine has been found increased to 6, 7, and even to 9. But, if we only consider how large a quantity of the watery portion of the blood passes off in this disease by the skin, and often by the bowels, and how at the same time the patient is disabled from taking muscular exercise, we need not feel much surprised at seeing the fibrinous element of the blood increased relatively to the other parts.

In Bright's disease of the kidneys, again, the fibrine often arises to a very high figure, but here there is an equal deficiency in some other constituents; for the blood does not lose its watery portion alone, but large quantities of its albumen also, in the discharges of pale urine, which characterize this disease in its progress. In these diseases, then, as in some others, the increase of fibrine may be relative, not real.*

With reference to the question whether venesection tends to increase of the fibrinous element, I am in some doubt, since the analyses which have been conducted to settle the matter vary somewhat, and have not always been made on blood proper for the purpose. On the whole, however, I think the

* In a case of albuminuria, with dropsy of a fortnight duration, Dr. Ayres found upwards of 11 parts of fibrine and tritoxide of proteine in 1000 parts of blood.—*Lancet*, Aug. 2d, 1845.

The same increase of fibrine in the blood is sometimes found during menstruation, owing, it is probable, to the same relative cause. The blood is at the time losing by the menstrual flow, water, albumen, and other blood constituents, but no fibrine; temporarily, therefore, the fibrine of the systemic blood seems increased. For analysis of the menstrual fluid, see Letheby, in the *Lancet* for Aug. 2d, 1845.

* Essay on the State of the Blood-vessels in Inflammation. *Guy's Hospital Reports*, 2d ser. Vol. vii. Part i.

inference is pretty strong in favour of the supposition that it does lead to increase; but at most the increase is small, and by no means in proportion with the decided increase of water which follows the same cause.

I need not go on to enumerate in detail the other diseases in which fibrine is increased, since the causes of its increase are probably the same in all. There is, however, one disease on which I must for a moment dwell, inasmuch as there is apparently something anomalous about it: this disease is sea scurvy. In all the accounts which we have of scurvy, from persons well acquainted with it, we find that the causes which give rise to it, are, want of pure air and nutritious diet, insufficient clothing, great fatigue, and the like. Now, these are just the things which modern science declares, on the strength of careful experiment, to be most active in diminishing the quantity of fibrine in the body; while the symptoms of the disease also show a very marked degree of impoverishment and fluidity of the blood: * and yet, in the analyses of the blood of three patients suffering from decided scurvy on board the *Dreadnought*, Mr. Busk found it buffed in two cases, and in all of them remarkably rich in fibrine. I repeat that these results greatly surprise me, and I should very much like to learn more upon this subject; for the impression forces itself strongly upon me, not that any error was committed in these analyses, but that at the time of their being made there existed in the blood another cause,—say an inflammatory affection of some kind, which led to what appears to be a remarkable deviation from expected results.†

* Thus, in an excellent Essay on Scurvy, published in 1804, by Mr. W. Hunter, that author enumerates the following causes, as giving rise to a disease which he terms *Cacotrophia*; evidently scurvy with dropsy superadded:—

- (a) "Food deficient in nourishment, or in stimulating power.
- (b) "Respiring an atmosphere deficient in
- (c) "Preceding disease. [oxygen.
- (d) "Intemperance.
- (e) "Indolence, and want of exercise.
- (f) "Excessive fatigue.
- (g) "Suppressed perspiration."

† The coming on of inflammation during typhus fever, a disease of the same type, will, it is well known, lead to an increase of fibrine. It is but right for me to state, however, that since the above was written, I have learned through the kindness of Dr. Hare, that by some analyses of scorbutic blood, lately made in University College Hospital, Mr. Busk's results have been fully confirmed.

I now come to consider the opposite condition to that last named—viz:

Decrease of Fibrine.—The circumstances which give rise to decrease in the fibrinous element, are those in which the process of fibrination is checked, or where the blood is overwhelmed with others of its constituents. Thus, as I have before hinted, in cases where the atmosphere is cut off from the lungs, this decrease instantly occurs; and so also, in those diseases which arise from improper food,* impure air, absence of evaporation from the cuticular surface: and suppression of the other secretions, as in cases of typhus, of continued fever, and particularly in cases of purpura hæmorrhagica. I allude strongly to purpura, because of its close affinity to scurvy; and I cannot but think that the analyses of Rouvier, which shows that in this disease the fibrine is sometimes decreased to 1 part in 1000,† tends greatly to strengthen the view I have taken above with reference to scurvy.

It has been long known also that a decrease of fibrine is exceedingly common after great bodily fatigue. Thus, in instances where animals have been over-driven, the blood is sometimes found nearly destitute of fibrine. I dwell upon this remarkable fact, because it is very corroborative of the view that fibrine is dependent for its existence on the respiratory process. In an experiment by Dr. Gairdner, in which he caused a horse to be galloped, and afterwards bled, he found the fibrine, though apparently increased, of normal quantity in reality; and this result, he says, is what after-thought showed to him should happen, since it was evident that any increase of fibrine that might be engendered by the increased respiration would be at once made use of by the rapidly acting muscles. Now, in the case of an over-driven animal, the circumstances are a little changed from this. The waste in the muscular substance is kept up for a long time, and the demand for fibrine is very great in consequence; but, the

* Lehman has found that the amount of fibrine is greater during the time that a person lives on animal food, than it is during a vegetable diet. And in this he is borne out by the experiments of Nasse on other carnivorous animals, such as dogs and cats. At the same time it is curious to observe, that the blood of herbivorous animals is richer in fibrine than is that of carnivorous.—Lehman's *Physiological Chemistry*, Vol. 2. Cavenish Soc. edit. p. 358.

† *Gazette des Hôpitaux*, Vol. vi. No. 90.

‡ *Essay on Gout*, 2d. edit. p. 15).

continued exertion leads also to failure in the respiratory process: the animal does not obtain the proper supply of air; the blood, consequently, is not fibrinized in proportion to the waste of fibrine implied, and hence, on examining such blood, we find a decided decrease in the fibrinous element.

On the effects of mercury, and of saline medicines, in lessening the amount of fibrine, I need not dwell,—they are so well known; but I must just make a passing observation with reference to the effects of alcohol. We are indebted to three American physicians—Drs. Peters, Goldsmith, and Moses—for an able report, embodying the history of 70 cases of death by ardent drinking, in all of which the blood seemed very deficient in fibrine, being fluid and dark, resembling cherry juice in appearance, and showing no tendency to coagulate.*

And, here, before I pass on to the third division of my paper, I take occasion to offer one or two observations on the different forms of fever, inasmuch as the past part of my subject leads me directly to the matter. And, first, I cannot too strongly object to the habit we have of designating at least two most dissimilar diseases by one name. We call the excitement which attends an inflammation, fever. We call the prostration of all the bodily powers, which arises from a polluted atmosphere, or from contagion, fever also; and yet, were ever two diseases more widely different? We have seen that as regards the pathology of the blood they differ entirely; and I am sure we have but to look at the symptoms of each to see an equal difference. Induration and softening, anemia and plethora, atrophy and hypertrophy, are, in fact, not more distinct from each other than are the two states, which I would call inflammatory excitement, and true fever. I am sure that the distinction I here indicate is required; it would prevent many grievous mistakes; and, a strict regard for scientific accuracy seems to me imperatively to demand its being made.

There are one or two other matters with reference to fever,—of course I mean

true fever, *typhus*—which I cannot let escape.

And, first, I would observe on the custom of giving large quantities of saline medicines, and especially of nitrate of potass, in true fever.

On theoretical grounds, it is evident that nothing can be more prejudicial than such treatment. The plastic element of the blood in such cases is already deficient in consistency, and, as some salines, like mercury, are known to have the effect of diminishing the consistency of this element, they should surely be as much avoided as mercury is avoided in such cases. And so also, for the same reasons, there is an objection to the profuse use of alcoholic and watery drinks.

And, what theory thus suggests, is, as far as my observations go, fully borne out at the bedside. The number of cases of fever which I have seen has been by no means few, nor have I been inattentive in watching them; and this I can say, that while I have seen much harm done by salines and alcoholic drinks, I have never yet seen a sinking patient from fever permanently rallied by the administration of any preparation of alcohol. I have spoken of the free use of watery drinks in fever; and these carried very far, as is often done, are likewise highly injurious. There seems to come on a state, indeed, when such drinks are not received into the circulation at all; when the specific gravity of the blood would appear to be reduced to that of the fluids given; in which state there is consequently no absorption; and the results are, a highly diluted state of blood, with an accumulation of fluid in the stomach and intestines, giving rise to tympanitis, uneasiness, weight, and other distressing symptoms.*

At the same time, I am bound to admit that the view I here take concerning the effects of saline substances in reducing the consistency of the fibrinous element of the blood, does not coincide with the views which certain very eminent continental physiologists take on the same subject.

* New York Journal of Medicine, 1845. Willan also narrates a case of purpura brought on by the drinking of undiluted spirits. I have alluded above to the great absence of fibrine in purpura. See Reports of Diseases of London, by Willan, p. 160.

* Adair, in his Thesis on Purpura (Edin. 1781), records a case in which that disease was self-induced in a farmer, by living on bread and water. And it is well known how much the same impoverished diet tends to bring on fever, an allied disease. It has also been shown by Albert, a German physician, that the water cure tends to induce symptoms similar to purpura.

Thus I find Lehman, in the last edition of his work on Physiological Chemistry, directly combating this view, and urging, in support of his argument, some experiments by Scherer, in which that experimentalist tries to prove that inflammatory fibrine is not soluble in solutions of nitrate of potash. "How, then (asks Lehman), can a solution of nitre prevent the augmentation of fibrine, through a solvent power which in this instance it actually does not possess?" Now, unfortunately for this reasoning of Lehman, it is not only in opposition to the experiments of Zimmerman, who asserts that inflammatory fibrine is soluble in a solution of nitrate of potash, but it is actually in opposition to his own conclusions; since he, in a previous page, writes in contradiction to Scherer, by stating that, in all his own experiments on the blood of man, he has found the fibrinous element soluble in solutions of nitre, whether it be from venous blood, from arterial, or from that drawn during inflammation (at least, with two exceptions). Other contrary arguments, having reference to the amount of nitre necessary to dissolve the fibrine, and to the inadequacy of other alkaline salts in effecting such a solution, are also named by this chemist; but, as these are not so important, I need not relate them.* Returning, therefore, I now pass on to the third part of my subject—viz. change in the characters of fibrine.

[To be continued.]

DEATH OF PRIESSNITZ.

PRIESSNITZ, the celebrated founder of hydropathy, died at Graefenberg on the 26th of November, at the age of 52. In the morning of that day Priessnitz was up and stirring at an early hour, but complained of the cold, and had wood brought in to make a large fire. His friends had for some time believed him to be suffering from dropsy of the chest, and at their earnest entreaty he consented to take a little medicine, exclaiming all the while, "It is of no use." He would see no physician, but remained to the last true to his profession. About four o'clock in the afternoon of the 26th he asked to be carried to bed, and upon being laid down he expired.

* Lehman's Physiological Chemistry, vol. i. pp. 349 to 363; Cavendish Soc. edit. Lehman affirms, however, that, in all cases, the solubility of fibrine by nitrate of potash is very imperfect. See an excellent paper by Dr. Basham, in the Med. Chir. Trans., Vol. xxxii. p. 1, in which the power of nitrate of potash in altering the blood during life is most satisfactorily shown.

ON THE PHYSICAL DIAGNOSIS OF DISEASES OF THE ABDOMEN.

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[Continued from page 758.]

DISEASES OF THE PERITONEUM—*Ascites*—*Acute peritonitis*—*Peritoneal adhesion*—*Circumscribed abscess*—*Chronic peritonitis*—*Tubercular deposition*—*Cancer of peritoneum*—*Hydatid disease of peritoneum*—*Air in peritoneum*—*Tuberculous disease of the mesenteric glands*.

Ascites, or peritoneal dropsy, occurs under two conditions of the serous membrane. In the one, which will be here described, the membrane is in its normal physical condition; in the other, whose consideration is deferred, it has undergone a change in its thickness and other physical characters which modifies somewhat the signs of liquid effusion into its cavity. Inspection of the abdomen affords but little information when the amount of liquid in the cavity is but trifling, any little increase in size being readily referred to increase of gaseous matter in the digestive tube, varying also as this varies from time to time. As it augments, however, the fulness of the abdomen becomes more permanent and decisive. When the quantity of liquid present is abundant, but not excessive, and there is at the same time no considerable gaseous fulness of the intestines, the abdominal enlargement is most obvious at the depending parts, this varying as to its special seat with alterations in the posture of the patient. Thus, when standing, the posture in which a patient is for the most part first examined, the fulness will be most remarkable below the level of the umbilicus, bulging out the wall symmetrically, while the upper part of the abdomen, that above the umbilicus, will either present its customary convexity, or exhibit some degree of apparent flattening. When the patient is placed upon the back, the fulness below the navel is less marked, the flanks now becoming bulged outwards symmetrically, while there appears comparative

flattening of the whole anterior face of the abdomen. When placed upon either side, that which is uppermost becomes flattened, while the undermost exhibits bulging. These signs are unaffected by the varying conditions of the stomach as to emptiness or fulness. When the amount of liquid has become excessive, there will be presented on inspection that degree of enlargement which has been already described as "general abdominal enlargement:" the visible upward limit of the abdomen will be observed much above the natural level, the angle of the epigastrium will be greatly increased, the margins of the cartilages of the lower ribs and the xiphoid cartilage will be everted, and the umbilicus flattened or protruded. The surface becomes uniformly and symmetrically globular and smooth, and though still a little more fulness is observable in the depending parts than elsewhere, yet the effect of the gravitation of the liquid is less remarkable than in the earlier stages of the disease. In some instances the superficial veins of the abdomen are enlarged. The respiratory movements are modified much in the same way and to the same extent as in flatulent intestinal distension. When the ascites is moderate, and occupies only the lowest part of the cavity, the distance of the navel from the pubes is proportionally increased; but as the effusion advances, and the tension comes to be exerted upon all parts of the abdominal parietes, the space between the umbilicus and the lower extremity of the sternum is also lengthened, and ultimately may proportionally exceed the measurement of the lower space. The circular measurements of the trunk are greatly altered, their relative proportions being nearly reversed; that at the level of the umbilicus being the greatest, and often that at the level of the nipples being the least; the other girths being intermediate. Even when this extreme condition is not presented, there will be less than the natural diminution of girth from the level of the nipples to that of the bottom of the sternum, and from this to the lower margin of the false ribs. The palpable signs of ascites are still more characteristic than those just described. On passing the hand over the distended parts the smooth evenness of the enlargement becomes more apparent than to the eye alone, and on

pressing in the abdominal wall the hand perceives a diminution of the normal softness and elasticity, and in place of them a sense of resistance and weight, whose principal seat will vary with the part which the posture of the patient renders dependant. The sense of weight is especially increased as the liquid accumulation becomes excessive. At the same time, the upper regions of the abdomen present the natural elasticity of the subjacent parts of the digestive tube, or even a greater degree of elastic softness than is customary in the healthy state. But the most valuable palpable sign is fluctuation, which is perceived in the depending parts wherever the fluid lies in contact with the soft parietes. When the wall is tense and the fluid serous and abundant, the waves will be finer, and follow more quickly upon the impulse than when the wall is more flaccid and the liquid of a less watery consistence. Percussion will also indicate the position and amount of the effused liquid, the parts in contact with it giving a dull sound, accompanied by a sense of resistance to the percussing finger. On tracing this upwards from the pubes and iliac regions as the patient stands, it is found to present at a certain height a line of level passing horizontally across the abdomen. Above this line the resonance of the intestines will be discoverable, occupying thus the epigastric and umbilical regions: it may either present its normal character, or be more tympanitic than natural. The dulness will be obvious enough on light percussion with light pressure of the pleximeter, but on pressing more deeply, the liquid is capable of being displaced, and the wall brought in contact with the hollow intestines, their resonance being then elicited by percussion. This manœuvre will always elicit resonance near the line of level, and for a certain distance below it, varying with the amount of liquid in the cavity; but above the pubes, if the ascites is considerable, it is rarely possible to obtain any resonance at all. The amount of depression requisite indicates the thickness of the layer of liquid at any given spot. If the abdomen be percussed as the patient lies on the back, the resonance of the hollow intestines will extend over the umbilical region, and lower down towards the pubes than when erect, and the hypogastric region and flanks will be dull.

If the patient be placed upon the side, the flank which is uppermost will be resonant, while that which is lowermost will be dull, and the line of level of the dullness will become parallel with the long axis of the trunk. After each alteration in the posture of the patient, a few minutes should be allowed to elapse prior to examination, in order to give time for the adjustment of the liquid and hollow viscera according to their relative gravity. By careful manipulation a "humoric sound" may often be elicited at the line of level where the peritoneal liquid and the gas of the bowels are only separated by a layer of membrane. When the quantity of ascitic fluid is small it is apt to accumulate in the cavity of the pelvis, where it is beyond the reach of the various methods of detection by the hand. In such instances the patient may be placed for some minutes upon the right side, with the pelvis raised a little so as to favour gravitation towards the right iliac region. The dullness of liquid in that situation may thus be made to supersede the natural resonance of the cæcum, and the palpable signs of weighty resistance and fluctuation may render its presence certain. In the case of infants, the fluid may be made to gravitate from the pelvis, and dullness be developed in the umbilical and hypogastric regions, by holding the child for some minutes in the horizontal posture, with the anterior part of the trunk downwards. According to the degree of abdominal fulness there will be added the signs of detrusion upwards of the liver, spleen, and stomach, the pulmonary resonance, breath sound, and vocal vibration, not descending so low as natural, sometimes not lower than the fourth rib in front, the apex of the heart being also perceived to lie high up and to the left. The compression of the lungs is under these circumstances also indicated by the presence of more or less tubular breath sound in the interscapular region, especially of the left side. When the vagina is relaxed it may happen that the whole uterus may be displaced downwards, or that the pressure of the fluid may press forward its posterior wall,—an event more likely to occur when any retroversion of the uterus is conjoined. For the most part the uterus retains its natural position, but if any change in its position occurs, it is some displace-

ment downwards. Of the several diseased conditions of abdominal organs which have already been passed in review, there are two especially which deserve notice here in connection with ascitic accumulation,—one of these is gaseous distension of the digestive canal, the other is tumour of whatever kind whether arising from the displacement or enlargement of solid organs or abnormal deposits or accumulations within them. The conjunction of *flatulent intestinal distension*, with ascites in all stages and degrees of accumulation tends to destroy the visible indication of gravitation of the fluid to the depending parts, and to render the abdominal fulness more equable uniform and rounded in all postures of the patient. By rendering the soft parietes also more tense, it causes the fluctuation wave as felt by the hand to be smaller, sharper, and more immediate upon the most trifling impulse. All kinds of *solid tumour* are obscured by the intervention of the fluid of ascites between them and the soft parietes of the abdomen. On practising sharp, quick, depression of the wall with the ends of the fingers, however, they may be perceived to impinge upon some solid substance, the extent and character of surface of which may be in some degree be ascertained. For the employment of this sign it often becomes necessary according to the seat of the tumour to vary the posture of the patient, and thus favour either gravitation of the fluid away from the tumour, or of the tumour towards the wall. In estimating the daily variations in the amount of liquid effusion, especial care should be used that the examination be made in the same posture at the same time of the day, and that the stomach and bowels be as nearly as possible in the same condition as to fulness. At all times when a patient is examined for ascites, it should be seen that the bladder has been recently and completely evacuated. The line of level of the dullness on percussion, and of the exact position of the measuring tape should be daily marked upon the surface. If the level of the liquid as determined by percussion is lower, and if the intestinal note is more readily obtained by pressure of the pleximeter, and at the same time the circular measurement of the lower parts of the trunk is lessened, the effusion may be certainly pronounced.

to be diminished; but if the line of level is remarkably higher, the intestinal resonance less readily obtained on pressure, and the circular measurements increased, no doubt can exist that the amount of effusion is greater.

The coincidence of *peritoneal thickening and shortening of the duplicatures of the membrane* with ascites, modifies in some degree the physical signs of this condition. The results afforded by inspection are much the same whether the peritoneum be thus altered or not; but the palpable and percussion signs will be found somewhat different. The resistance to the pressure of the hand will be greater, and an idea of the thickness of the parietes will be afforded, as well as of weight, in displacing the liquid; and after tapping has been performed, instead of the wall feeling soft and lax, it will give to the hand more or less of the impression of a stiff empty cyst. Fluctuation if not less perfect will yet be more obscure, according to the thickness of the parietal membrane, and the waves will appear larger. As in the simple form of ascites there will be dulness on percussion wherever liquid extends, but the difference between them lies in the impediment which the shortening of the peritoneal duplicatures, and possibly agglutination of the intestinal coils amongst themselves may offer to the floating upwards of the latter, and to their contact with the soft parietes in the umbilical region. When this is the case there will be dulness on percussion over this region also, which in ordinary ascites is resonant. On pressing back the parietes at the umbilical region, unless the intestines are quite bound down to the spine, their resonance may be arrived at.

Acute peritonitis.—Peritonitis may be diffused or local. *Diffused* peritonitis varies like inflammation of other serous membranes in its products, according to the asthenic or cachectic state of the individual it attacks. In the one instance the predominant effusion will be fibrinous matter or organizable plasma; in the other liquid matters of various degrees of consistence according to the predominance of serous or of corpuscular elements. Peritonitis of whatever type it may be, does not exist long before it produces gaseous fulness of the intestinal canal, the signs of which condition become early observed in the course of

almost every case of this disease. Both to the eye and to measurement the abdominal respiratory movements are noticed to be nearly abolished, while those of the superior part of the chest are proportionally increased. According to Dr. Sibson, the abdominal movements at the sides are not so much lessened as in front, especially if the peritonitis have not seriously affected the surface of the diaphragm, or the serous covering of the liver, spleen, or stomach. The rhythm of the respiratory acts is altered, the expiratory act being shortened. Palpation is commonly much impeded by the extreme tenderness of the abdomen, but when the hand is applied with pressure much muscular resistance is perceived. The effusion of lymph is far less constantly indicated by physical signs than the occurrence of a similar effusion upon the surface of the pleura or pericardium. The signs, however, when observed are of the same nature, being those of palpable and audible friction. The friction vibration is less commonly to be felt than the friction sound is to be heard. Neither of them can be developed unless there be a certain amount of resistance to pressure offered by the part against which the parietes are applied. For their occurrence as a result of the diaphragmatic movements during respiration, it appears necessary that the resistance should be afforded by some solid substance upon which the lymph may be effused. Hence it is that friction phenomena accompanying the respiratory acts are mostly perceived over the region of the liver or spleen, or over some abnormal solid tumour. Under these circumstances friction is often noticed during the inspiratory act alone. When the lymph is deposited in other situations, the pressure and movement of the parietes with the hand may be necessary to develop it. Its occurrence independently of these two sources of motion, and in unison with the peristaltic movements of the intestines, not only points to the surface of the intestines as the seat of the deposit, but also lends a degree of probability to the assumption that the surface is rendered harder than usual and more resistant and rougher by the deposit of tubercles, &c. While it shows that the intestines are in the last instance free to move, experience appears to favour the idea that the occurrence of friction is most fre-

quent at that stage of effusion, and under circumstances which immediately precede or accompany the formation of adhesion. It is at all times a very variable sign, and to be discovered at all must for the most part be sought frequently. It may only be noticed for a single day, and even be undiscoverable after a much briefer interval. The effusion of fluid is indicated by several of the signs which point to its existence in ordinary ascites. When trifling in amount, its gravitation to a favourable spot for detection must be induced as in the lesser degrees of ascites, but more time must be allowed for the change of posture to operate in consequence of the greater consistence of the effused liquid. Its presence will, as in ascites, be indicated by the resistance it offers to the pressure of the hand, by the dullness on percussion, by more or less evident fluctuation. The quantity of effusion may be in some cases as abundant as in ascites, and then the aspect of the abdomen and the other physical signs will be the same as in that disease; the umbilicus may become very prominent, and from a large and fluctuating projection, or there may be a special pointing at some other spot on the abdominal parietes.

Local peritonitis will vary in its physical signs according to the part of the membrane affected. Prior to the formation of abscess, its signs will be those of increased muscular resistance to the pressure of the hand, and deficient respiratory movement of the same part as determined both by the eye and by the aid of the "chest measurer." The other indications of effusion of lymph, viz., palpable and audible friction as well as liquid effusion, if the latter be not circumscribed by adhesions, will be the same as those noticed under the diffused form of the disease.

Peritoneal adhesion occurs, as the result of serous inflammation, between various abdominal organs and tumours and the corresponding part of the parietes. The principal sign which indicates that adhesion is about to take place is the occurrence of palpable or audible friction over the spot, but when it has become firm and the adhesion is close, the signs are those which show that the part is immoveable. Thus, when it occurs over the liver, this organ is shown by percussion not to descend as it ought to do with the respiratory

movements, and not to be displaced at all by flatulent or other distended states of the stomach and colon, while it offers an impediment to the descent of the diaphragm on that side as indicated by signs which have already been frequently alluded to. Where a tumour is palpable the parietes will be immoveable over it, or only moveable with it, and it will not descend with the acts of inspiration. The omentum not uncommonly forms an adhesion by some part of its fold to the parietes in the neighbourhood of the pelvis, or to some of the pelvic organs, and the stretched omentum may form a band, beneath which a portion of intestine may become compressed. This cause of internal strangulation may, according to Schuh, be diagnosed by the discovery on palpation of a kind of hard cord immediately posterior to the parietes of the abdomen, directed upwards from the lower part of the belly either straight or a little obliquely, and losing itself insensibly above. Along with the unequal distension of the abdomen which marks the obstruction of the bowel, there will under these circumstances be a depression along the course of the stretched omentum, which is duller than other parts upon percussion. Too much reliance, however, must not be placed in this sign, as its presence must be very rare, and I have known a similar cord-like sensation imparted to the fingers by the healthy obliterated urachus.

Circumscribed abscess, enclosed by adhesions may occur anywhere in the sac as the result of local or general peritonitis. When near the soft parietes, it is indicated in addition to muscular resistance to pressure over its seat of formation, and deficient respiratory movement, by more or less local fulness over its seat, with palpable hardness and dullness on percussion, bounded perhaps at the edge by some humoric sound. The tumour and dullness do not alter with changes in the posture of the patient, or with the acts of respiration. The hardness varies much in its diffusion or degrees of circumscription, sometimes being more sometimes becoming less defined in its outline as it progresses. As it extends and approaches the surface it commonly becomes softer, and some amount of boggiess or fluctuation is perceived. When occurring between the

folds of the omentum it is apt to take a sinuous course, and, extending more or less irregularly amongst them, to produce a palpable hard and immoveable tumour across the abdomen above the navel, which can only be distinguished from a solid growth by its acute course and by the accompanying subjective phenomena. An abscess of this kind may form upon the diaphragmatic surface of the liver, and may simulate by its physical signs abscess of the parenchyma of the organ in this situation, it may point between the lower ribs on the right side, and may burst and discharge itself like abscess of the liver either upon the surface or into the chest, or simultaneously in both directions. When localized abscess occurs near the umbilicus this fold becomes prominent, more or less distended, and fluctuating, and may burst and allow the abscess to discharge itself through the opening. Such an abscess may like an hernial protrusion receive an impulse on coughing. When seated over the hypogastrium it may resemble by its physical signs a distended bladder, but micturition or catheterism will obviate the error. A common situation for the circumscribed collections is one or other of the iliac regions, since they may originate on the one side from disease of the cæcum or appendix vermiformis, and on the other from disease of the sigmoid flexure. On the right side the abscess may commence as a deep seated hardness, over which the parietes and muscles can be readily made to move, subsequently forming a tumour more or less circumscribed, as large as the closed fist, or even more extensive. Abscess in these situations, as well as in other parts of the abdomen, sometimes communicates by a process of ulceration either primary or secondary, with the canal of the intestines; the contents of the latter then become extravasated more or less abundantly into the sac and mixed with its secretion, and then what is called a *fecal abscess* is formed. The only physical signs which perforation adds to the circumscribed abscess, are those which indicate the pressure of gas: there may then be perceived a sense of crackling like that of emphysema or gurgling on pressure of the hand; percussion may elicit, according to the contents of the sac and the freedom of communication with the intestine, resonance or metal-

lic tinkling, and auscultation may detect sounds indicative of the passage of gas through a narrow opening or through liquid, the latter being of a gurgling character, perhaps accompanied by amphoric or metallic tinkling. Abscess from perforation of the appendix has been known to form a tumour high enough in the flank to simulate a renal tumour, lying between the crest of the right ileum and the lower ribs, and in such a case the deception may be favoured by the colon being perceived by percussion and auscultation to lie in front of it. Another situation for these abscesses which deserves mention is the lower part of the pelvis, namely, the rectovaginal pouch of the female, or the rectovesical pouch of the male. In either case, examination by the rectum will readily detect the tumour, more or less soft, prominent, rounded and fluctuating, but in the female it will also protrude inwards the posterior wall of the vagina, and its characters can from the facility of using a finger in each canal be more easily ascertained than in the male.

Chronic Peritonitis.—Several of the diseased conditions which have just been described result from a certain degree of chronicity in the peritonitis, but, under the term of chronic peritonitis, are here included only those cases in which the morbid change affects the membrane more or less generally. In the confirmed disease, the abdomen is for the most part enlarged, large superficial veins being visible upon the surface. Where the cavity contains any fluid, as it sometimes does for a certain period, its signs will be those already described under the head of ascites—namely, some increase of fulness in depending parts with dulness and obscure fluctuation. In some cases the cavity communicates with the canal of the bowel, and faecal extravasation is conjoined: pointing may then take place at some part of the parietes, or there may be protrusion and thinning of the umbilicus, and through an opening in one of these situations the contents may be discharged. The signs of fluid, however, in other cases may be wanting from the first, or after persisting for a brief period may disappear. The abdomen will then feel tense, the wall being immoveable upon the organs beneath, and the parietes and the abdominal

contents will appear to be hard, as if forming one mass. The sensation imparted to the hand has been otherwise described as if there was a firm band encompassing the abdominal contents, over which the skin and muscular tissues only could be moved. The wall is very tense, resisting the pressure of the hand, but still, when strong pressure is used, is found to be elastic. Percussion is every where clear, and even tympanitic, except there be scybalous accumulations, rendering the corresponding part of the parietes dull. Sometimes the abdomen, in place of being enlarged, is flatter than natural, or retracted, and then the tympanitic resonance will be absent, and the peritoneal thickening and narrowing of the calibre of the intestines will be indicated by a dull percussion sound. Where local obstruction of the intestines is produced, the signs of this condition already described are exhibited; and, in addition to the general abdominal enlargement, there may be irregular elevation of the surface from fulness of the intestinal coils, which will vary with their peristaltic movements.

Tuberculous deposition in the folds of the peritoneum, or accompanying the products of chronic peritonitis, if to any considerable extent, produces signs by which it may be distinguished from the simpler and non-tuberculous form of the disease. For the most part, the signs are those of non-tuberculous peritonitis; but, in addition to these, there are indications of abnormal deposit, in the existence of palpable and visible tumour in some one or more parts of the abdomen. The most common seat of abundant tuberculous deposit is the *omentum*, which, in these cases, almost constantly forms a palpable tumour, mostly of an elongated form, crossing the abdomen somewhere above the umbilicus, or near its level, and extending from one hypochondrium to the other. The tumour has often a marked border above and below, is hard, more or less irregular on its surface, and either fixed or somewhat moveable. It may be so extensive as to simulate an enlarged liver. It is dull upon percussion, and bounded by resonance above and below. In some instances the tumour does not cross the abdomen, but extends from the margin of the ribs on the left side to the umbilicus, simulating a large spleen, from which its less ready mo-

bility will distinguish it. In some cases of children, where the tuberculous deposition has been confined to the omentum, the abdomen generally has been observed to be flaccid and supple. When the tuberculous omentum encloses part of the transverse colon, its dullness will be less perfect than where it is gathered up entirely along the great curvature of the stomach. Where the omentum is greatly thickened, and forms a considerable tumour, it may have the effect of proportionally lengthening the distance of the navel from the lower extremity of the sternum. Other tumours may be perceived in addition to those which can be referred to the omentum,—placed irregularly about the abdomen, elongated in various directions, and either separate from one another and from the omental tumour, or connected together and appearing as offsets from the tuberculous omentum. These tumours arise from the tuberculous false membranes between the intestinal convolutions, and are bounded and separated by resonance, although dull upon percussion themselves. All these tumours occupy the same position from day to day, and are unaffected by changes in posture of the patient, or by purgation. As in non-tuberculous peritonitis, ascites may be conjoined with the diseased condition of the membrane. In this case the tumours may be capable of being felt through the liquid by means of sudden deep pressure; or, if this be impossible, they may always be discovered after tapping. The tips of the fingers may then sometimes be insinuated beneath the margin of the omental tumour. When the false membranes have been especially firm at the lower part of the abdomen about the inlet of the pelvis, they have occasionally prevented the rise of the fundus of the urinary bladder, so that when full it has pressed upon the vagina, causing the anterior wall to protrude, and even to appear externally, and, by pressing on the uterus, has caused its retroversion. Tuberculous peritonitis may not only be conjoined with ascites, but with circumscribed abscess and faecal extravasation, whose local signs will then be added to those of the general disease of the membrane.

Cancer of the peritoneum, when affecting the free surface of the membrane, without forming a tuberos mass, cannot be detected by any distinguishing

physical indications. In one case alone, where the parietal peritoneum was infiltrated with colloid, the umbilicus presented a stretched as well as flattened appearance; but this was in a case where there was general enlargement of the abdomen conjoined, and where the part of the parietes corresponding with the navel was infiltrated. The *omentum* is a common seat of cancerous growth: it mostly forms a tumour across the upper part of the abdomen, and may extend from the epigastrium nearly to the pelvis, producing both local prominence and bulging, as well as palpable tumour. For the most part the tumour is equally extensive on both sides of the median line, but may, occasionally, where the omentum has previously formed an adhesion to the lower part of the abdomen, form a tumour on the right side. It is superficial, unless separated from the wall by ascitic fluid, hard, more or less unequal upon the surface, and presenting a distinct lobulated edge. It is dull on percussion, except where it encloses a portion of the transverse colon, and there is mostly resonance between its upper part and the margin of the ribs. It commonly feels as if adherent to the anterior parietes, and does not, under this condition, descend at all during the acts of inspiration. When the cancer affects the fold of the *mesentery*, it may form a palpable tumour below and a little to the left of the umbilicus, rising towards the margin of the ribs on the left side, but not passing beneath them. Masses of encephaloid cancer are not uncommonly found about the lower part of the abdomen, the sigmoid flexure, broad ligaments of the uterus, &c. Beside local fulness, irregular tumour in the iliac or hypogastric regions will be perceptible; and when it extends towards the cavity of the pelvis, and lies between the bladder or the uterus and the rectum, it may be felt by the finger in the rectum or vagina as well as by the hand pressing back above the pubes. In other cases the uterus mostly becomes fixed, either by adhesion or implication in the morbid mass. A cancerous tumour should not be manipulated roughly, since it might be broken down, if containing much blood in its substance, as is often the case with masses of encephaloid cancer. In a case of colloid cancer of the peri-

toneum, recorded by myself,* there was an effusion of gelatinous matter into the peritoneal sac, indicated during life by general and extreme enlargement of the abdomen, as in ascites; dulness on percussion, and perfect fluctuation.

Hydatid disease of the peritoneum.—

No affection of the abdomen presents to the eye such serious and extensive deformity as this in its advanced stage. General enlargement is visible on inspection, which commonly commences as a local dilatation of the superior part of the abdomen, with protrusion of the hypochondria, from this part extending downwards mostly to the pelvis. In addition to this there are visible numerous rounded or oval elevations, which aid often in giving to the abdomen a most irregular and unsymmetrical form. Even at the most advanced stages of the disease the enlargement of the upper half of the abdomen, and its circular measurement, are greater than the lower; and the obliterated umbilical fold is proportionally much nearer to the pubes than in health. When once perceived the enlargement increases with great rapidity, and may appear to commence with the signs of hepatic hydatid disease. In a case recorded by Dr. Bright, the abdomen presented two rounded and large protuberances, as if from two sacs, one at the upper, and the other at the lower part, between which was a resonant sulcus, into which the hand might be laid. The obstacle presented to the descent of the diaphragm lessens, or entirely destroys the abdominal movements in respiration. The encroachment of the abdomen upon the thoracic limits, as evidenced by the diminished extent downwards of the pulmonary resonance, &c., and the elevation of the heart's apex is perhaps more remarkable than in any other disease occasioning general abdominal enlargement. The exterior of the parietes is commonly marked by reticulations of enlarged veins. Palpation renders perceptible to the hand the same superficial irregularity as is manifested to the eye, and the form and size of the rounded cysts may be pretty clearly ascertained through the abdominal wall. The natural soft and elastic feel of the abdomen, and the resonance due to the intestines, are confined to the

* Medico-Chirurgical Transactions, vol. xxxi.

part to which they are displaced and confined, which may be one or other of the lumbar regions or flanks, one of the iliac regions, or some limited spot near the anterior parietes. All the rest is dull on percussion. The cysts under sufficiently favourable circumstances may fluctuate obscurely, and may manifest the hydatidic fremitus.

Air in the peritoneum.—The passage of gas by perforation into the peritoneal sac may have the effect of filling it generally, or it may be limited by adhesion to some particular locality. When it is generally effused there is uniform general enlargement of the abdomen, which forms with more or less rapidity, and does not present the gravitative character of the enlargement in ascites; if it be extensive, the umbilicus becomes prominent. The anterior parietes, though distended, are remarkably elastic, and yield readily to the pressure of the hand, imparting to it at the same time an idea of thinness. The sound on percussion is tympanitic, the depth of the note being regulated by the tenseness of the wall, and the quantity of gas present. The great peculiarity of it is, that except where adhesion interferes it is uniform over the whole surface, even over the seat of the natural dulness of the liver, and over that of any tumour which might have been previously perceived. Even when a tumour is adherent to the anterior parietes, unless it be large, and adherent over a large part of its surface, it may be lost both to the touch and to the ear on percussion. Circumscribed gaseous accumulation may be located in almost any part of the peritoneum, either arising from the passage of gas into a part of the cavity, which may be all which adhesion has left unclosed, or from the passage of gas from the intestine into a circumscribed space, from which fluid had passed through a perforation into some part of the canal. The former misfortune will be indicated by the signs of gas in the abdomen, limited to the non-adherent part; but, in the latter instance other signs are often added, in consequence of the simultaneous presence of the liquid secretions which the cavity at first contained. In addition, then, to elasticity to the feel and resonance on percussion, more or less suddenly developed, perhaps coincidently with a discharge of pus,

&c. by the bowels, pressure may develop a sense of gurgling, and there may be metallic tinkling on percussion. In a case recorded by Barth and Roger, the gaseous tumour gave a sense of crepitation to the hand; and, on compressing it with the stethoscope, crackling sounds were perceived, gurgling, and a peculiar sound indicative of the passage of the intestinal gas through a narrow aperture.

Tuberculous disease of the mesenteric glands, until it has attained a considerable degree of advancement cannot be detected by any physical indications. In the latter stages of the affection, however, there is some general enlargement of the abdomen, often with enlargement of the superficial veins, which present a tortuous appearance, joining with those on the chest. In rare instances, depression and retraction of the anterior parietes has been observed. The anterior parietes rarely present any tenseness to the hand, but generally yield readily to its pressure: they may be expected, however, to be tense where chronic tuberculous peritonitis or tubercle of the omentum are conjoined. The sound on percussion is not tympanitic, unless gaseous intestinal distension be conjoined. Palpable tumour may not be discoverable even when the tuberculated glands form a mass of considerable size. To perceive this sign it is essential that the abdomen be soft and flabby, so as to allow of the depression of the anterior wall as far back as to the vertebral column. When the tumour is perceptible, it is always situated somewhere near the navel, close upon the vertebral column, is hard to the touch, and unequal upon the surface, feeling as if composed of a number of agglutinated masses. In some cases the tumour is fixed, in others it appears somewhat moveable, but both this and its size may seem to vary from day to day according to the tension of the wall, and the state of fulness with gas or feculent matters of the intestinal tube.

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[To be continued.]

OBSERVATIONS ON THE
DEVELOPMENT OF THE MAM-
MALIAN BLOOD-GLOBULE,AND ON THE YELLOW MATTER OCCURRING
IN THE SPLEEN IN ITS RELATION TO
THE BLOOD.BY C. HANDFIELD JONES, M.B. CANTAB.,
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LONG as the blood-globules have been discovered, it can scarcely be said that the manner of their development is yet positively known.

An excellent history of the various opinions and most recent enquiries on this subject, is contained in the chapter on the development of the blood in Dr. Baly's appendix to his translation of Müller's Physiology. The chief difference in the accounts given by different observers seems to be this,—whether the coloured globule of mammalian blood is formed *per se* in the liquor sanguinis, or developed within previously existing cells.

Mr. Wharton Jones describes the red corpuscle as the escaped nucleus of a previously formed coloured nucleated cell, which passes through two earlier stages of granule cell and uncoloured nucleated cell. Dr. Baly seems to coincide with Kölliker and Fahrner in their views, and observes that "very little doubt now remains of the correctness of the opinion that the first variety, viz., the pale or colourless nucleated corpuscles (which according to Kölliker are developed in the liver), constitutes an early stage in the development of the perfect red corpuscles and that they are gradually transformed, first into the nucleated coloured corpuscles by assuming colouring matter, and then into the non-nucleated coloured ones by losing their nucleus, and becoming flattened." The development of fresh corpuscles in the blood of the adult animal is regarded by the above authorities as taking place in a similar way, the lymph and chyle corpuscles passing through transitional stages till they become the common red corpuscles. Henle, in his General Anatomy, supports the same view.

On the other side, we have Dr. Carpenter maintaining that the red cor-

puscles multiply by a division of the old ones; radiating lines are seen running towards the periphery from the centre, the margin becomes crenated, and the original particle at last separates into a number of small new ones. This author quotes Mr. M'Leod's description of the development of the blood corpuscles in the chick, which is to the effect that small granules first form, enlarge, become clear and afterwards dull in their centres, this dulness advancing to granularity; subsequently the central part becomes the nucleus, and colouring matter is produced between it and the external enveloping membrane, the oval form lastly being assumed. Here there is no generation of bloodglobules in pre-existing granule cells.

Vogel, in his Pathological Anatomy, has selected an interesting case which, as he observes, seems fitted to afford some elucidation of the morphology of the formation of the blood. In a fungoid growth which sprouted from the medullary canal of the humerus in a case where the arm had been amputated for encephaloid disease, there were seen in a section "many small points and streaks of blood." "All these newly formed portions of blood were very large, and visible even to the unaided eye as streaks or points: where the naked eye discovered no blood, none was to be seen under the microscope. It seems, therefore, that the larger and not the smallest capillary vessels are first formed. The form of these masses of blood varied considerably, being sometimes roundish or quite indefinite, sometimes elongated, while at other times several portions were united together in a star-like figure. The masses of blood were not definitely circumscribed, and gradually lost themselves in the parenchyma; there were not as yet formed any proper vessels of uniformly equal diameter, and distinct vascular walls were still wanting. The colour of the blood was even now red, varying from a pale yellowish red, where it was thin and dispersed to a dark red, where the mass appeared more closely arranged. The blood was fluid, and could be pressed from the parenchyma; it showed also clearly defined blood-corpuscles which lay partly scattered separately in the parenchyma, and partly collected in larger masses; the former was rarely observed.

There was no evidence of a development of these accumulations of blood-corpuscles in common cells (vascular cells). The individual newly formed blood-corpuscles were somewhat smaller than common; their diameter was the 600th, 500th, or at most the 400th of a line, and they had not the usual cup-like central depression, but were irregularly spherical and angular. Sometimes they appeared separate, sometimes several were united together. On the addition of water they became pale and gradually disappeared; the same thing occurred, but more rapidly, with acetic acid. There was no trace of nuclei."

"This blood had evidently originated in the interior of the parenchyma (plastic exudation), and at first in portions which corresponded with the future larger vessels. It had not been formed in vascular cells, but free in the parenchyma, and appeared earlier than the vessels. It was formed sooner and more rapidly (in less than two days) than any of the tissues, even earlier than the areolar tissue."

To the above accounts I wish to add as contributions to our knowledge of the subject some observations of my own, which have been made incidentally at various times with no desire of supporting or opposing any particular view. In a foetal rabbit at about the middle of its uterine existence, I examined the blood taken from the inferior cava just where it receives the hepatic veins. I noted that the blood globules were spherical and of a dark red colour, the majority having a diameter of $\frac{1}{3750}$ th in. to $\frac{1}{3333}$ rd in.; some few, however, not exceeding $\frac{1}{5000}$ th in.: these last were feebly formed, and appeared to be young ones. I saw none included in cells.

In a foetal guinea-pig $1\frac{1}{2}$ inch long, I observed the blood-globules in the liver to be perfectly formed, and to have a diameter of $\frac{1}{3750}$ th in., no trace was seen of their being developed in other and larger cells. In a second foetal rabbit of the same age as the above, I observed the blood-globules in the liver to be large, but not different in any other respect from those of the adult. There was no trace of their development in other cells. A young guinea-pig only two days old, was killed with chloroform; I examined the blood from the following different localities: that from the left subclavian vein presented

blood-globules which were rather pale and delicate, became very easily slashed at the margins, and had a diameter varying from $\frac{1}{5000}$ th to $\frac{1}{2500}$ th in. No excess of white corpuscles, and no nucleated blood cells, were observed. In blood from the portal vein the corpuscles were more globular, less brilliant, not reflecting the light so much; they appeared smaller, the majority scarce more than $\frac{1}{5000}$ th in., and none above $\frac{1}{3333}$ rd in.; the white corpuscles were few, there were no red blood cells. In blood taken from the hepatic veins, I noted the globules to have resumed in great measure their biconcave form; many were seen floating on their edge, there were numerous small ones not larger than $\frac{1}{5000}$ th in. more than I saw in any of the other specimens, while none exceeded $\frac{1}{3333}$; some white corpuscles were seen, but no blood cells; the blood formed a good fibrinous clot. Blood from the right ventricle presented globules tolerably biconcave, very uniform in size; some few, however, very small, less than $\frac{1}{5000}$ th in.; these were always free and uncontained in other cells; a few white corpuscles were observed. In blood from the left ventricle I observed that the globules were of medium size, a few still of the diameter of $\frac{1}{5000}$ th in.; there were very numerous white corpuscles, but no cells containing blood globules to be seen anywhere. In the liver of a foetal sheep about four inches long, I could find nothing but ordinary blood-globules about $\frac{1}{5000}$ — $\frac{1}{4500}$ th in diameter, there were no coloured blood cells, nor any cells containing blood-globules. In some foetal rabbits at an early period of uterine life, I observed the blood-globules to be coloured cells, each containing a nuclear corpuscle which at first was indistinctly seen, being concealed by the coloured fluid, but when this was removed by the endosmotic action of water it became very apparent; its diameter varied from $\frac{1}{4500}$ th in., it was colourless and sub-granular.

The opinion which I feel inclined from these and other observations to adopt, is that the red corpuscles are not necessarily produced in other cells, but that they arise in all the later periods of uterine and subsequent life, as small vesicles or it may be semi-solid spherules in the fluid blastema of the blood; that having at first a diameter of less than $\frac{1}{5000}$ th in. they subse-

quently enlarge, and acquire a true membranous envelope, while their contents separate into a film of colouring matter, surrounding a central soft granulous mass—the so-called globulin. In the earlier periods of development the blood-globules as noted in the last observation are nucleated cells; these probably correspond to the nucleated blood-globules of the three lower vertebrate classes; they do not continue beyond a certain time, but are then replaced by the ordinary blood-globules, which henceforth are produced in the way just described. The great decay of blood-globules which must be constantly taking place, according to the great law of vitality which assigns “a time to be born and a time to die” to every part, must require an equal generation of new ones; so that if the nucleated blood-globules were a necessary stage of development, it would surely be no unusual thing to discover it. I believe we ought to be cautious in assuming rare instances as proof of the real existence of phenomena, which by their nature should be of frequent occurrence.

The above view is confirmed by an examination I have recently made of some fluid of dark coffee-ground aspect, which was drawn off by Mr. I. B. Brown from an ovarian cyst, and which he kindly gave me to examine. The fluid was a solution of albumen, and became almost solid on adding nitric acid to it: it deposited on standing a distinct reddish sediment quite of the aspect of blood. Granule cells in every stage of formation, and various lowly organized celloid forms, were most abundantly diffused throughout it; there were besides some traces of columnar epithelium, which had probably formed the internal lining to the wall, and very numerous and variously developed blood-corpuscles. These last I am sure did not escape into the fluid from the wound, nor do I think they were simply effused as a hæmorrhage from the blood-vessels of the cysts; I believe them to have been truly developments in the albuminous blastema, just like the multitudinous celloid forms so abundantly mingled with them. This is surely not more improbable than that teeth, hair, skin, or fat, should be found in this situation. Entertaining this idea, I set to observe these blood-globules carefully, expecting it would be a good opportunity to trace the developmental

stages. The largest had a diameter of $\frac{1}{2500}$ th in., and were circular or oval vesicles, often showing their biconcave form as they turned upon their edge; some had been rendered more spherical probably by endosmosis.

In many of these large, I may say hypertrophied ones, the central corpuscle or mass of globulin was most beautifully seen, contrasting by its pale, whitish aspect, with the red zone of fluid that surrounded it.

The size of the central mass, and the width of the red zone, varied in different specimens. Other red corpuscles were from $\frac{1}{5000}$ th to $\frac{1}{3333}$ rd inch in diameter, they appeared as well defined, spherical, deep-coloured globules, having somewhat granulous contents, and a strongly marked envelope. I saw nowhere any coloured globules contained in cells, but here and there minute colourless vesicles, not exceeding or less than $\frac{1}{5000}$ th in. diameter, which I believe were the germs of new blood-corpuscles.

The blood-globules of the general system in this case were of quite the ordinary aspect, none presented the central mass of globulin as those above mentioned, and they did not attain a greater diameter than $\frac{1}{3333}$ rd in. This observation seems to me interesting, both in its relation to the development of blood-corpuscles, and in the exaggerated representation it affords of what is known to be their natural structure.

It was manifest that the central mass of globulin was not a nucleus homologous to the nucleus of an hepatic or other glandular cell, but simply a portion of pale granulous substance, forming part of the contents, and distinct from the coloured fluid.

To the above remarks respecting the development of the blood-globule, I may append a few with regard to the disintegrating change which they are described by Kölliker as undergoing in the spleen. That his interpretation of the fact observed by others independently, as well as by myself, of the occurrence of yellow corpuscles in the spleens of various vertebrata, is in part correct, I think is very probable; yet I must add, that subsequent examinations since I became acquainted with his views have by no means inclined me to acquiesce entirely in them. In particular, I doubt how far it is proved that all the yellow corpuscles and granules found so often

in the splenic parenchyma are metamorphoses of blood-globules, or at least metamorphoses taking place in the way he describes. To me it seems quite possible that they may be deposits of pigmentary matter, in part, at least, from the liquor sanguinis, and this for the following reasons: *—1. Among very many mammalian spleens which I have examined, I have never happened to see a cell containing unequivocal blood-corpuscles; the yellow matter, when present, always appears more or less diffused, or at least forming groups which are not definitely limited. 2. In a perch I have observed vesicles containing coloured corpuscles, which may have been altered blood-globules, but differed from the normal ones in their irregularly spherical form, their deeper colour, the invisibility of any nucleus, and the greater granularity of their contents. 3. The yellow corpuscle masses are larger and more numerous in fishes than I have ever seen them in mammalia or birds; yet, doubtless, the amount of blood-globules in these is immensely greater than in fish, wherefore the debris of their decomposition should also, one would think, be more abundant. 4. The pigment corpuscles in the livers of toads and frogs are almost precisely similar to those in the spleens of the same; but the former, beyond doubt, are simple deposits of pigmentary matter from the blood, and do not proceed from decomposing blood-globules: why should not those of the spleen be of similar origin? 5. If it be conceded, as I think it must be, that the yellow corpuscles are seldom—at least in mammalia and birds—seen included in cells or vesicles, and also that they are as often diffused as in groups, does it not seem to follow that their massing together, and formation within cells, is an accidental, not a necessary or constant phenomenon? 6. In one instance I think I have observed a different mode of formation of the yellow corpuscles to that maintained by Kölliker. In the spleen of a sheep I found in several Malpighian corpuscles deposits of yellow matter, which were situated unquestionably in their substance, and consisted of deeply-coloured corpuscles and amorpho-granulous matter: one in particular seemed to be commencing; some

of the nuclei were infiltrated with yellow fluid, and surrounded with a deposit of minute granules or amorphous-coloured matter: another deposit of a similar early date, also in a Malpighian corpuscle, contained two distinct yellow corpuscles,—one measuring $\frac{1}{333}$ rd in.; the other, $\frac{1}{5000}$ th in.: both were oval, and had no resemblance to blood globules. Now, as capillaries do not permeate the Malpighian corpuscles, it seems impossible that these yellow deposits in their substance could have proceeded from altered blood-globules; and if not so formed here, there is no reason why they should necessarily be so formed in the pulp.

Though I cannot convince myself that the yellow corpuscles and granules are formed, as Prof. Kölliker describes, by the aggregation of blood-globules and their inclusion in cells, wherein they become disintegrated, yet I think it probable enough that individual blood-globules may stagnate in the parenchyma, and there undergo a chemical change, by which yellow granules may be produced. This would accord much better with the diffused condition of the yellow matter which is so common, and would also find an analogical confirmation in the production of yellow granules very similar to the splenic in blood which has stagnated in the vessels, or been effused in living parts. This process has been most fully examined by Virchow, and I have myself seen the change which he describes in blood stagnating in its vessels. This was in the long vessels running between the tubes of the medullary cones in a diseased kidney: on adding liquor potassæ, the blood in them gradually disappeared, leaving unaffected a considerable quantity of colouring matter in the form of distinct yellow granules. These granules were certainly not inclosed in cells. But though I could in this way explain the origin of the diffused yellow granules which are not above $\frac{1}{810000}$ th inch in diameter, yet I cannot thus account for the production of the larger, deep-coloured yellow corpuscles, which are very numerous in many spleens, and more constant, I think, than the diffused matter. These are oval, ovoid, or spherical in shape, from $\frac{1}{5000}$ th to $\frac{1}{5000}$ th in. in diameter, bounded by a strongly-marked envelope, and filled by a deep yellow fluid, with scarce any trace of granular matter. It seems difficult to

* This, however, has, since the above was written, been shown me by Mr. Gray in the spleen of the horse.

believe that these are produced by the fusion, as it were concentration, of the colouring matter of several blood-globules together, and they cannot certainly result from alterations of single ones. Sometimes they do present some traces of being formed by the fusion of two or more corpuscles together, but quite as often they do not, and their margin appears quite even. Even if compounded of smaller corpuscles, it is quite possible that these may have been originally similar yellow ones, and not blood-globules.

On the whole, therefore, it seems to me that there is not yet sufficient microscopic evidence that the yellow matter occurring in the spleen is solely derived from altered blood-globules, and still less that the decomposing changes of the blood-globules ordinarily take place in the way described by Prof. Kölliker.

Some of my own observations as to the structure of the spleen may find a place here,—not that I have anything novel to communicate, but would wish to contribute what I may, in the way of confirmation, to the solidity of the general fabric of our knowledge respecting it. Prof. Kölliker's account of the outer membrane of the Malpighian corpuscles appears to me exactly correct. I have never been able to see any true homogeneous membrane enclosing them comparable to the limitary membrane of glands, but only a smooth expanse formed of the white and yellow elements of areolar tissue, distinctly continuous with that which pervades the parenchyma. It is, in fact, as Prof. Kölliker has said, simply "a modified portion of the vascular sheath." I am quite of Prof. Kölliker's opinion, that the Malpighian corpuscles have no connection with the lymphatics: I regard them as corresponding most nearly to the thymus gland,—like it, consisting of mere masses of the simplest organised particles, nuclei, or the first rudiments of their further development, and, like it, becoming distended with their contents after the reception into the system of abundant ingesta.*

Vessels one or two removes from the capillary size spread out over their surface, but I have not been able to find any true capillary plexus surrounding them. This, however, is certain,—that vessels do not permeate their substance: injected material forms a complete layer around them, but leaves their interior quite uncoloured. I have several times observed the yellow matter collected in especial quantity all round the Malpighian corpuscles: I have seen it in this situation presenting large groups and corpuscles, while the parenchyma elsewhere was full of mere diffused yellow granules. This indicates, I conceive, a more active nutrition proceeding in the neighbourhood of these bodies.

Whether a true capillary plexus pervades the red pulp seems to me very doubtful. I strongly incline to the belief that no such exists. In examining arterial branches dissected out and washed, I have seen small vessels of capillary structure proceeding from them: but the most careful examination of injected specimens has never shown me anything like the capillary plexus that exists in other organs. I think it most probable that the arteries terminate in what may be considered as the commencements of capillaries, but that these are soon lost, or rather form short channels without membranous walls amid the pulp, from which again the large vein-spaces quickly take their origin. These vein-spaces, like ordinary veins, enlarge as they proceed, and present in no part of their course anything like dilatations or cells. On this point Prof. Kölliker's description is most exact.

In the red pulp of the spleen in the sheep I have seen very perfectly the organic muscular fibres described by Kölliker: these constituted flat, broadish fibres or bands, about $\frac{1}{2500}$ th in. wide, consisting of a pale, scarcely mottled substance, bearing elongated nuclei at intervals. These bands circumscribe irregular spaces, which are filled with the nuclei of the pulp, and with a rather dense net-work of imperfectly developed fibres. These seem to resemble the nucleus fibres of Henle, and are often connected with nuclei from which they are developed. I believe their number varies much in different conditions of the spleen, and that they are concerned in producing an unnaturally firm state

* After I had written this sentence, I referred to the well-known "Essay on the Thymus Gland," by Prof. Simon. At p. 99 he expresses a similar opinion in his wonted copious and elegant language, with its rich store of perspicuous, far-seeing, and most instructive ideas. In reading his works, one almost feels compelled "*talis jurare in verba magistri.*"

of the organ which is occasionally met with.

In the red pulp of guinea-pigs' spleens I have found some peculiar corpuscles which I have not seen described by any author. These are vesicles about $\frac{1}{2500}$ th in. in diameter, exhibiting bright, glistening contents, enclosed in a strong envelope: they occur partly free, partly enclosed in a strong envelope, together with a distinct nucleus. In some few of the glistening vesicles I observed a reddish-coloured corpuscle, having some resemblance to a blood-globule; but this was rare, and constituted, moreover, the only apparent instance of the development of blood-globules in the spleen that I have ever noticed.

I can hardly agree with Prof. Kölliker, "that a continuous process of cell-growth obtains in the spleen (he is speaking of the red pulp) by which new cells are formed around nuclei, and old ones disappear." To me it appears that the most normal condition of the pulp or parenchyma is, that the nuclei exist simply as such, mingled with a mere trace of amorphous and granular or oily matter. Very often, however, the nuclei present some feeble attempts at cell-development; either they enlarge and expand into granular globules, losing entirely their nucleolar spots, or a slight film of granulous matter collects round them; or they may grow into a celloid particle, or even into a complete cell with envelope. This last step is the most rare.

I am not aware that any one has particularly noticed the remarkable circumstance that the nuclei of the pulp are red; in which respect they certainly differ from other nuclei, and notably from the colourless ones of the Malpighian corpuscles. It is possible this colour may depend on their extremely close relation to the blood-globules, whose colouring matter may be conceived to exude sufficiently to impart to the adjacent corpuscles a red tint. Either this must be the case, or the nuclei of the pulp must have this peculiar tint as part of their normal constitution. On either supposition, there seems a possibility of the yellow matter being derived in another way than from disintegrating blood-globules—viz., from the destruction of the nuclei themselves.

1, Southwick Place, Hyde Park,
Nov. 19.

MEDICAL GAZETTE.

FRIDAY, DECEMBER 12, 1851.

THE Royal College of Surgeons of England has recently issued a DRAFT SUPPLEMENTAL CHARTER, embracing new rules respecting—1. The election of members to the Fellowship without examination; 2. The admission *ad eundem*, without examination, of Fellows, Members, or Licentiates of the Colleges of Surgeons in Edinburgh and Dublin, and of the Faculty of Glasgow; 3. The election of Fellows to the Council; 4. The retirement of Members of the Board of Examiners; 5. The constitution of a special Board of Examiners in Midwifery.

These are the five points of the new Charter. They have obviously been framed with the spirit and in the intention of meeting the wishes of a large majority of the profession, on the difficult question of medical reform. We do not consider it necessary to reprint the whole of the Charter: we shall confine our extracts to those parts of it which refer immediately to the alterations above-mentioned:—

Election of Members to the Fellowship without Examination.

"That it shall be lawful for the Council of the said College at any time or times hereafter, by diploma or diplomas under the seal of the said College, in such form as the said Council may think fit and direct, and without any previous examination, to appoint any person or persons who at the date of our said letters patent was or were a member or members of the said College of fifteen years' standing; and also any person or persons who, being at the date of our said letters patent a member or members of the said College of less than fifteen years' standing, shall have attained at the time of such appointment the standing of fifteen years, to be a Fellow or Fellows of the said College, subject to the regulations hereinafter mentioned and directed."

From this it will be seen that a mem-

ber of the College of *fifteen years* standing may claim admission to the fellowship, provided he was a member at the date of the Charter in 1843. Those who have become members since 1843 will have no claim to admission without examination.

It is contended by some, that fifteen years' membership should at all times give a member a right to the Fellowship, whether he was or was not a member at the issuing of the Charter in 1843. But the obvious objection to this is, that no one would think of procuring, by a protracted course of study and severe examination, *that* to which, by simply waiting fifteen years, he would have a claim *de jure*. The proposition, therefore, simply embraces the annihilation of the Fellowship as a mark of honour, and puts an entire stop to the creation of a more educated class of men.

But a claim of Fellowship *de jure* is in itself a novelty. We believe it to be without precedent in any College or University in Europe and America, that where there are two classes of fellows and members, the members become fellows by *mere lapse of time*.

The election of members to the Fellowship is to be by vote or ballot of the Council, to be decided by a majority. The candidate must produce a certificate, signed by six Fellows of the College, of his moral character and professional attainments; and it must further state "that he does not sell or supply drugs or medicines, otherwise than in the due exercise or practice of his profession as an apothecary." A declaration to the like effect, signed by himself, must also be delivered to the Secretary.

The Council have by this clause solved the "General-Practitioner question," and have drawn a broad line of distinction between those who trade in drugs and those who merely use them in the treatment of their patients.

Members who have become such since 1843 may, however, be nominated to the Fellowship by the Council, provided at the time of admission they are members of not less than *twenty years* standing. The conditions and regulations for such admission are left to the judgment of the Council. The annual admissions under this clause are limited to *two persons*. We presume that the object of this limitation is to prevent the fellowship from being swamped by members, and to discourage any idea that it can be easily procured without examination. Considering, however, that there are many members who have become such since 1843, and who have, from conscientious or other motives, abstained from presenting themselves for examination while the question of their rights was still pending, it appears to us that it would be advisable to substitute, for the words "any two persons," "any number of persons not exceeding ten annually." This annual nomination might then be limited to those gentlemen who had already entered the profession and were students at the date of the Charter in 1843, or became students between 1843 and 1851. The Council have too much limited their power by fixing *two* admissions annually as a maximum.

Every member thus elected or nominated to the Fellowship without examination, will be required to pay a fee of ten guineas. We have already recorded our opinion on this matter, and need not now revert to it. In justification of the claims of a fee, it may be remarked that there are few societies of which the fellowship is worth having, in which the honour must not be paid for; and the F.R.S., F.L.S., F.G.S., and F.Z.S., would be glad to be let off as easily as the F.R.C.S. by the payment in one sum of ten guineas, instead of a heavy admission fee and an an-

nual contribution of from two to four guineas.

The admission of Members of other British Colleges ad eundem.

"That it shall be lawful for the Council of the College, by diploma under the seal of the College, to admit without examination to the Membership or Fellowship of the said College, on such conditions, and on the payment of such respective fees as the Council of the College shall by bye-law determine, the fellows, members and licentiates respectively of the Royal College of Surgeons in Ireland, the Royal College of Surgeons of Edinburgh, and the Faculty of the Physicians and Surgeons of Glasgow, provided such fellows, members, and licentiates shall be, at the time of their application for admission, in the *bonâ fide* practice of the profession of a surgeon in England or Wales, and shall have obtained their respective diplomas or licenses after examination, and such persons so admitted to such membership or fellowship, shall take rank amongst the members or fellows of the said College, according to the date of such last-mentioned diplomas or licenses."

This is a very liberal concession, which we hope will be immediately reciprocated by the Dublin and Edinburgh Colleges. It is the first step to a single qualification throughout the empire. The fee to be paid for the admission *ad eundem* is not stated. It is to be fixed by the Council.

Election of Fellows to the Council.

The election to a seat in the council is limited to fellows of fourteen years' standing, provided, at the time of election, the candidate be in *bonâ fide* practice as a surgeon, and that he be not practising as an apothecary. All other restrictions respecting practice and residence contained in the former charter are abolished. If, after election, a member of Council cease to practise *bonâ fide* as a surgeon, or if he shall practise as an apothecary, he will forfeit his rights and privileges, and his seat will be declared vacant.

We must reserve our further remarks on this Charter for another occasion.

It is very gratifying to observe the efforts which are being made in various directions to elevate the status of the several branches of the medical profession, by raising the amount of qualification required for admission to degrees or licenses. Not long ago we had occasion to record the highly favourable results of the experiment tried by the London Society of Apothecaries, with a view to promote an improved preliminary education. We have now to bring before our readers an admirable project adopted by the heads of the University of Dublin—namely, of conferring a Diploma in Surgery; of which an important feature is, that the candidates must undergo a certain amount of preliminary study in Arts. The minimum of study in Arts, required for this diploma, is one year at Trinity College. This may appear small: but it is necessary to explain, that in order to be enrolled as an under-graduate, or, in other words, to enter College, it is necessary that the candidates shall pass an examination in the Greek and Latin Classics. *After* this they will have to go through the prescribed course of education in Arts, of which we are glad to see that Logic and Mechanics form a part.

The following paper, which has been forwarded to us by the University authorities, will explain the nature of the requirements for the new Diploma. It will be perceived that the heads of the medical departments of the Army, Navy, and Ordnance, have given their high sanction to the plan. Why have not the Colleges of Surgeons done so likewise?

UNIVERSITY OF DUBLIN.

Diploma in Surgery.

RESOLVED by the Provost and Senior Fellows:—

That a Diploma in Surgery be given to such Students as are matriculated in Medicine, and have completed at least one year in Arts, on the following conditions:

1. To complete one year in Arts, it shall be necessary to have answered at least one Examination, subsequent to the Junior Freshman Year; or to have completed the Junior Freshman year only, by passing the Michaelmas Examination of that year, and keeping one previous Term, either by Lectures or by Examination.

2. Students who have not passed an Examination in the Senior Freshman year will be required to attend one Course of Lectures in Logic.

Students who have not passed the Junior Sophister year of the Undergraduate Course will be required to attend one course of Lectures on Mechanics, with the Assistant to the Professor of Natural Philosophy.

3. Students so qualified will be admitted to Examination for the Diploma in Surgery, as soon as they shall have completed the prescribed Curriculum.

4. This Curriculum shall extend over a period of four years, and shall comprise attendance upon the following courses of Lectures in the School of Physic in Ireland:

Anatomy and Physiology, three Courses; Demonstrations and Dissections, three Courses; Theory and Practice of Surgery, three Courses; Practice of Medicine, one Course; Chemistry, one Course; Materia Medica, one Course; Midwifery, one Course; Practical Chemistry, Botany, Medical Jurisprudence, one Course each, of three months' duration.

[Four of the above-named Courses, together with one Course of Demonstrations and Dissections, may be attended in any School of Medicine recognised by the Board.]

Also attendance for three Sessions, each of nine months' duration, on Hospital practice, together with attendance on Clinical Lectures on Medicine and Surgery:

1. Richmond, Whitworth, and Hardwicke Hospitals.

2. Steevens' Hospital.

3. Meath Hospital.

4. Jervis Street Infirmary.

5. City of Dublin Hospital.

6. Mercer's Hospital.

7. St. Vincent's Hospital.

Of the Courses of Lectures which are of six months' duration, not more than three can be attended during any one Session.

5. Candidates for the Diploma who have complied with the foregoing Regulations must pass an Examination before a Court of Examiners, consisting of the Regius Professor of Physic, the Professors of Anatomy, Surgery, Chemistry, Midwifery, and Botany.

The Examination of each Candidate will be divided into two parts, one of which shall be devoted to Anatomy and Physiology, Surgical Anatomy, the Theory and Practice of Surgery, and Operative Surgery; and the other to Practice of Medicine, Midwifery, Chemistry, Materia Medica, and Toxicology.

6. Candidates for the Diploma must submit their Certificates and Testimonials of qualification to the Regius Professor of Physic and to the Professor of Surgery, who shall sign the Chart necessary to be laid before the Senior Lecturer and Registrar, previous to the issuing of the *Liceat ad Examinandum* to the Professors.

November, 1851.

We are glad to perceive that among the Courses specially recommended to students who intend to qualify themselves for the Public Service is one on MILITARY SURGERY.

Reviews.

On the Nature and Treatment of Softening of the Brain. By RICHARD ROWLAND, M.D., Assistant-Physician and Lecturer on the Principles and Practice of Medicine at the Charing Cross Hospital, &c. &c. 8vo. pp. 137. London: Highley. 1851.

Cases of Softening (Ramollissement) of the Brain; with General Observations, including a few upon Fatty Degeneration, in its Relation both to that Disease and Apoplexy. By WILLIAM FREDERICK BARLOW, M.R.C.S., Resident Medical Officer to the Westminster Hospital. Pamphlet. 8vo. pp. 21. London: printed by Wilson and Ogilvy. 1851.

THE two works which are here brought together present a very complete history of a most obscure cerebral disease,—one in which the great desideratum is an improvement in its diagnosis. There are some forms of cerebral disease in which the diagnosis is easy and almost self-evident, but in which the pathology remains obscure: such are the convulsive diseases. With softening, the case is, to a certain extent, reversed. The microscopical researches of Mr. Paget, Dr. Quain, and of the author of the second work now under notice, have thrown great light upon the morbid

changes upon which the symptoms have depended, and have shown, by post-mortem investigation, that the disease is in numerous instances another form of fatty degeneration of the vessels of the brain. It has, however, remained a melancholy fact, that the satisfaction of this knowledge has only been revealed after life has been destroyed by the malady: the diagnosis had remained as obscure as ever. Any aid to the determination of this point must therefore be regarded as being in the highest degree important. Mr. Barlow has rendered this great service to practical medicine in his papers published in our journal some months ago. We quote the following from page 14 of the reprint of those papers:—

“If apoplexy shall be proved, as I doubt not it will be, an extremely common consequence of fatty degeneration, any clue to the probable progression of the latter in the cerebral vessels will be plainly of value. And may we not find it in the *arcus senilis*, which Mr. Canton has proved to be one form of such degeneration, and often associated with other forms of it?”

Mr. Barlow mentions several cases in which this point has been found of practical diagnostic value. Dr. Rowland has also subsequently referred to the same circumstance (p. 92, op. cit.), but is apparently unaware that it had previously been dwelt upon by Mr. Barlow.

The inflammatory form of softening is fully treated by Dr. Rowland, who has collected all the opinions of the best writers upon softening of the brain, and whose work may therefore be looked upon as containing the bibliography of this form of disease.

Mr. Barlow's papers have a more original character, as they consist of cases with practical commentaries, affording most valuable illustrations of the pathology and treatment of the disease, not omitting, also, a very fair sketch of its literature.

Both works will form important additions to the library of the pathologist.

On Nervous Affections connected with Dyspepsia. By WILLIAM BAYES, M.D. 8vo. pp. 38. London: Gilpin. 1851.

SUCH a prefatory sentence as the following leaves us utterly at a loss to know what to make of the object of this book.

“In laying the following pages before the public, I feel that some apology is necessary for intruding upon their notice a subject which has been so ably and so frequently treated upon by men of no ordinary talent, from the age of Abernethy down to the present time.”

The book is certainly the perfect echo of this passage; there is not one new idea in it that we can discover. We are therefore as much at a loss after as before its perusal to find a reason for its publication. We cannot allow that the necessity which the author states that he has frequently felt of writing down his dietetic and hygienic instructions to his patients, constitutes at all a valid plea for rushing into print with such a total want of original matter.

Proceedings of Societies.

PATHOLOGICAL SOCIETY OF LONDON.

DR. P. M. LATHAM, PRESIDENT, IN THE CHAIR.

November 18, 1851.

FOUR members were elected, and nine candidates for membership were proposed.

Report on Tuberculous (?) Deposit in the Uterus and Fallopian Tubes.

Dr. WEST, on being called on by the President, said, that at the last meeting he had made an inquiry with reference to the microscopic characters of the matter in the uterus which had been shown by Dr. Bristowe, partly because we are so very much in the dark still with reference to disease of the lining membrane of the uterine cavity, partly because some doubt has been thrown on the nature of supposed tuberculous disease of the uterus, not merely by a general discrepancy of opinions concerning it, but also by some remarks by M. Robin, in the *Archives Générales* (for August, 1848, p. 406), where he speaks of having found the peculiar appearances supposed to be due to tuberculous ulceration of the os uteri, really produced by an enormous accumulation of epithelium cells. He had further stated, that in undertaking to report on the case, he should avail himself of the assistance of some gentleman possessed of that familiarity with the use of the microscope to which he himself could not pre-

tend; Dr. Brinton had, therefore, kindly examined the matter, and, whilst he referred to that gentleman for an exact description of the appearances presented, he stated generally that they certainly were not such as one ordinarily observes in tuberculous matter.

Dr. BRINTON then added that, in conjunction with Dr. West, he had examined the caseous-looking substance occupying the uterus and Fallopian tubes. He found it to consist almost entirely of epithelial cells with inter-cellular substance in a moderate quantity. The cells were, for the most part, of the cytoblast form, from a 2 to a 4 or 5-1000th of an inch in diameter: they were shrunken and wrinkled by the action of the alcohol in which the preparation had been immersed. The intercellular material was gelatinous and clear, and was, doubtless, also exaggerated in quantity from the same cause. These appearances were very similar to those usually seen in the inflammatory exudation of a mucous surface. A glairy mucus occupying the os tinæ had also the same microscopic structure, but the cells were larger and more distinct; being apparently more recent. The tumours on the peritoneal surface, which had also been examined by Dr. West and himself, exhibited a structure which was very unlike the small amount of organisation usually found in tubercle. They were distinctly fibrous, both to the naked eye and to the microscope. Their texture was tough and semi-cartilaginous; their fibres long, irregular, and branching. Very few cell-forms could be seen in and among them, and granular matter was also but sparingly present.

Dr. BALY asked Dr. Brinton what were the grounds on which he declared the deposit not to be tuberculous.

Dr. BRINTON considered that the matter in the preparation was not tuberculous, because it consisted principally of an accumulation of epithelial scales, and had a more fully organised structure than tubercle.

Mr. ADAMS inquired if any of the members had seen this diseased condition of the uterus unaccompanied by a tuberculous state of the peritoneum or of the lungs.

Mr. PRESCOTT HEWETT had been present at the *post-mortem* examination of a young girl in whom both the Fallopian tubes and the ovaries, together with the liver and the lungs, were affected with tuberculous disease. He had seen three or four such cases at St. George's.

Mr. ADAMS had met with several such cases, but had never seen any which was not accompanied by similar disease in the lungs, liver, or peritoneum. He then referred to scrofulous disease of the kidneys, and added, that he had always hitherto

regarded the deposit as being of the nature of tubercle.

Dr. BALY thought that the presence of the epithelial scales, observed under the microscope, did not show that there was no tuberculous matter. In examining some intestines lately, he had found much fibrous matter mixed up with epithelial scales, and he thought, therefore, that in a case of scrofulous inflammation of the uterine membrane it was possible the epithelial scales might be thrown off into the scrofulous matter. He did not see why the cytoblasts spoken of might not partake of the tuberculous character.

Dr. BRISTOWE read the following report on *Dr. Bence Jones' Case of Cysts in the Kidneys*,

presented at the preceding meeting. "As might have been expected, microscopical examination displayed a considerable number of minute cysts. They were not uniformly scattered; so that while some sections contained none, others were thickly studded with them. They (that is, those that were more particularly microscopic objects) were of nearly uniform size, some being as large as Malpighian bodies, but the majority somewhat, though not much, smaller. They had a peculiar pellucid appearance, were round or oval in outline, admitted of somewhat easy isolation from the surrounding parts, were elastic, so that they immediately recovered from the effects of pressure, and even when injured by the needle, retained, for the most part, their original form. On examination with a quarter of an inch object-glass, they were seen to present a somewhat obscure concentric marking, which was certainly in some cases, and probably in all, due to a laminated arrangement of the walls, which were usually very thick, and in one instance at least occupied two-thirds of the diameter of the cyst. The walls of the cysts were somewhat granular, in addition to being laminated; and their contents were chiefly made up of molecules and granules of oily matter; in a few cases they were dense and dark, and had an orange tint. Acetic acid caused a slight degree of expansion and transparency in them, but no other change. Though the cysts somewhat resembled Malpighian bodies, they were for the most part easily distinguishable. They were smaller, more uniformly transparent, either when seen on the face of a section or at its margin; and, whether at the margin or isolated, they retained their natural form and appearance; whereas a Malpighian body in the above situations almost invariably becomes free of its capsule, which is either entirely lost or remains loosely attached to it as a thin, almost structureless membrane; and, again,

the capsules of the cysts were thick and laminated, and their contents presented no appearance of a Malpighian tuft; so that, taking all these facts into consideration, it is quite certain they were not Malpighian bodies,—at least, not healthy ones. How cysts in the kidney arise, I am unprepared to say. Neither in this nor in any other I have examined, have I been able to verify the opinion of Dr. George Johnson, that they arise in the tubuli uriniferi. I have never seen a cyst continuous with a tube; and I imagine that that must be seen before this view can be considered proved. Neither did I see here, as I have done in others, any appearance which would warrant me in believing that they were fresh formations arising from cytoblasts, as is stated by Mr. Simon, Mr. Paget, and others; there was not that variety in size and appearance which would be expected in cysts having such an origin; and, lest I have conveyed the impression (in my anxiety to distinguish between them and the Malpighian corpuscles) that I lean to the belief, that, in the kidney under consideration, they arose in those bodies, I may say, that that idea has nothing in its favour beyond the uniformity in size of the smallest cysts, the occasional difficulty of distinguishing one from another, and their (I believe) uniform origin in the cortical substance. With respect to the larger cysts, I may remark that their walls presented a faintly-granular and fibrous appearance; but I was unable to distinguish any epithelial lining, and the only microscopic characteristic of their contents was an appearance of molecular matter, in many places aggregated into masses. The other parts of the kidney, Malpighian bodies, and tubules, were healthy, so far as I could discover. One could hardly expect that so many cysts should arise in a healthy kidney; but, if it were diseased, the differences between it and a healthy gland were not sufficiently well marked for me to distinguish them."

Dr. BENCE JONES exhibited, through the kindness of Dr. Beith,

Two Kidneys containing Serous Cysts,

from a fine, hale, hearty Greenwich pensioner, 93 years old, who died of pneumonia after a few days' illness. The organs of the body were healthy. The prostate gland was somewhat smaller than natural. He had no symptoms of kidney affection, but the condition of the urine was not observed. He had gonorrhœa eighteen months before his death. On the surface of the left kidney there was a large cyst, which contained one ounce and a quarter of yellow clear fluid. On examination with the microscope, some cells like mucus globules, but larger, full of granular matter, rarely

nucleated, were seen. The fluid was slightly alkaline from volatile or fixed alkali; specific gravity, 1012.14; contained a trace of carbonates; with ammonia gave a slight crystalline precipitate of phosphate of ammonia and magnesia. Contained very little, if any, alkaline phosphate, very little sulphate, much albumen. From about six drachms of the fluid, no positive proof of the presence of urea could be obtained. Two drachms of the fluid did not give even microscopic evidence of uric acid. 1000 grains of fluid contained 971 of water, and 29 of solid residue, which was chiefly albumen.

Dr. BRINTON inquired of Dr. Bence Jones what he thought to be the origin of the carbonate of ammonia; whether it might not arise from the decomposition of urea?

Dr. BENCE JONES replied, most probably, but not certainly. The quantity was so small as not to alter his view of the nature of the fluid: the alkalescence was so slight, that the phosphate of ammonia was not precipitated until ammonia had been added.

Dr. Brinton and Dr. Bristowe were requested to make a microscopic examination of the kidneys, and to report thereon to the Society at its next meeting.

Dr. BENCE JONES also exhibited some

Sarcinæ from the Stomach of a Boy.

The patient, aged 14, was admitted into St. George's Hospital for Bright's disease, with peritonitis, on the 5th of November. On the 12th, the urine being of a very high specific gravity, and highly albuminous, was given to Dr. Bence Jones for examination, and sarcinæ ventriculi were found to be present in it. This led to an examination of the matter which had been vomited, and sarcinæ in much greater quantity were found therein. As another specimen of urine did not contain any sarcinæ, and that found in the bladder and kidney after death was perfectly free from them, there could be little doubt that the specimen of urine which was first examined had been in some way mixed with vomited matter. On the 13th the patient died, and was examined by Dr. Ogle, who states that there was œdema of the lower extremities; that both pleural cavities contained much yellow serum, more especially the left one; and on both lungs recent yellow fibrin existed. The lower lobes of both lungs were non-crepitant, tough in consistence, and sank in water. On pressure, a quantity of brown-red dirty fluid escaped. In some of the subdivisions of the pulmonary artery distributed to the lower lobes, coagula of fibrin existed. The heart (excepting distended superficial veins) was healthy. Abdominal cavity contained about two pints

of milky purulent fluid. Stomach was apparently healthy, and contained a quantity of olive-brown coloured fluid and solid substance, consisting chiefly of undigested food; and in this a number of sarcinæ existed, of both clear and granular character. Excepting slight injection of the duodenum, the intestines were all healthy. The kidneys were smooth, and externally apparently healthy, but a sectional surface showed white yellowish deposit in the cortical part; and on microscopical examination, the epithelia of the cortical and pyramidal parts contained considerable fat within them, but not to any very great extent, as did also the Malpighian bodies. The extra-tubular parenchymatous part, also, was much exaggerated in quantity. Kidneys weighed $11\frac{1}{2}$ oz. In the pelves of both kidneys a peculiar thick dark-yellow substance existed, consisting chiefly of fibrinous cysts and mucus; but no sarcinæ and no crystalline matter could be found.

Three Cases of Fracture of the Spine, unattended with Paralysis.

Mr. SHAW brought for the inspection of the Society a boy, aged eight, who, three months and a half ago, had fracture of the spine at its lower part, without paralysis. The spinal column was straight to the second lowest dorsal vertebra; at that point there was an abrupt and projecting curve, with the convexity to the left side, formed by the two lowest dorsal and three highest lumbar vertebræ; the whole displaced bones gave rise to a distinct, irregular, hard swelling in the left lumbar region; the most prominent points were the articulation between the left oblique processes of the first and second lumbar vertebræ, which, sticking out between the fibres of the longissimus dorsi and sacrolumbalis pressed against the skin and the spinous process of the second lumbar vertebra. The projecting bones had no motion on each other, having become ankylosed since the injury. The patient, who had been sent from the country, was not seen by Mr. Shaw till nine weeks after the accident. The mother, an intelligent woman, stated that, while getting up behind a waggon in motion, her boy became entangled between the body and the wheel; when extricated, his face was swollen, as if strangled, blood flowed from his nose and ears, his eyes were blood-shot, and the lids presently became black and swollen, so that he could not open them; but there were no wounds about the head or chest; and an hour and a half afterwards, when she first saw him, he was sensible, and recognised her by her voice. The surgeon,

who did not visit him till he was in bed had his attention directed to the head or chest, but did not examine the back. Having ordered warm baths for several nights, the mother observed that the movement of placing him in the bath, especially if she lifted him by the loins, made him cry out with pain; and it was the same when she assisted him in passing his evacuations. Although she had previously spoken about the pain, the surgeon did not examine the spine till five weeks after the injury, when the projection that now exists was noticed; she is positive that before the accident he was straight and quite strong in the back. He was kept in bed for a fortnight longer; and, before he could stand, was taken to London, where he remained a week. Some days after his return he began to walk a little, and when brought to the hospital on the ninth week, he walked pretty strongly. After procuring proper spinal supports, he was allowed to run about, and he has remained free from pain in the back or elsewhere till the present time. The mother is quite clear in stating that he never lost either power of motion or sensibility in his legs, that he required no assistance for passing his water, and his stools were regular.

2. Mr. Shaw next exhibited a cast of the back, taken from a patient, aged 48, admitted under his care June 28th, last year, for fracture of the right femur. After recovering from that injury, it having been remarked that he had deformity and stiffness of the back, inquiries were made; and it was found that two years before, while working in a railway cutting, a mass of earth fell, and buried him under it, and it was a quarter of an hour before he was dug out. He was then found lying doubled up, with his head near his feet; and since that time he has never been able to hold his body straight. The parish surgeon visited him once, but did nothing for him; and he lay in bed for eleven weeks without medical attendance. He never lost sensation or power over his legs, and only felt weak in the back. At the end of that time, he walked with difficulty three miles to a railway station, and thence travelled thirty miles to his home. By degrees he regained strength in his back, and, although unable to lift heavy weights, he could work as a field labourer, till he met with his last accident. The cast showed a general incurvation of the spine, from the ninth dorsal to the third lumbar vertebra; besides considerable projection of the spinous processes of the first and second lumbar vertebræ, the articulations between the oblique processes were visible on both sides, but more distinctly on the left; the spine

was immovable at the projecting part,—the result of ankylosis.

3. For the third case, Mr. Shaw exhibited a drawing. The patient was a sawyer, aged 31; and was admitted into Middlesex Hospital on May 24th, 1845. While in a stooping posture, a log of wood, said to be between eight and ten tons in weight, rolled upon the back of his head and shoulders, and bent him down. From the sixth dorsal to the third lumbar vertebra, there was an abrupt, irregular projection of the spine. Below the seventh dorsal vertebra, there was a depression two inches in extent, caused by rupture of the interspinous ligament, and fracture of a spinous process; the greatest prominence of the swelling was formed by the spinous processes of the first and second lumbar vertebrae, and by the oblique processes on each side, which projected through the torn muscular fibres; below the third lumbar vertebra there was another pit, caused by laceration of the interspinous ligament. The patient retained power over his legs, as an instance of which, he walked, with the support of his fellow-labourers, some distance before he was put in bed. Although his feet and legs were, as he said, "numb," yet he could feel slight pinching, and the contact of the clothes. He afterwards complained much of aching and pricking pains, like that of needles, in both legs below the knees, but that ceased in about six days. Although strictly cautioned against moving in bed, he frequently rolled himself, and that with much force, from one side to the other. He was unable to make water, but was sensible of the passing of the catheter; he had also some difficulty in controlling the action of the sphincter ani; but, in less than a fortnight, he recovered that power; and the command over the bladder was restored at the same time. His eyes were blood-shot, and the lids black from ecchymosis, and, for a few days, the sputa in coughing were tinged with blood. On the tenth week he sat up for some hours in the day, supported by spinal stays. On the fourteenth week, being able to walk about the ward, he requested to be discharged. Five months afterwards he was met in the streets walking, with the aid of two sticks, at a good pace, and he could accomplish three miles at a time. Two years after that (July, 1847) he was heard of as working at light jobs in the fields.

Mr. Shaw, finally, referred briefly to another case similar to the above, which had come under his notice in August, 1828, and was related by him in the 17th Volume of the MEDICAL GAZETTE. He remarked, that they were examples of the extensive

injury which the spine might sustain without paraplegia, if the fracture took place below the point where the "cauda equina" begins. At the tenth dorsal vertebra the part so called commences; and from that to the termination of the spinal cord at the second lumbar vertebra, the roots of the nerves enclose and protect that important organ so effectually, that severe injury to the surrounding bones may not reach the cord. When fracture occurs lower down, where the cauda equina alone occupies the vertebral canal, of course the dangers of paralysis taking place are diminished; for the long, loose, nervous fibrils composing that part can accommodate themselves to the changed direction of the canal without loss of function.

Dr. OGLE presented a specimen of

A Large Cyst occupying the cavity of the Pelvis, and containing great numbers of Acephalocysts.

This cyst, along with the rectum, bladder, ureters, and kidneys, was removed from the body of a man, aged 51, who died of peritonitis, in connection with extensive disease of the kidneys. The cyst consisted apparently of condensed areolar tissue, and was of the capacity of about a pint and a half. It pressed considerably upon the rectum and bladder, and upon both ureters, for the distance of about three inches of their vesical extremities, though not to their complete occlusion. The remaining parts of these tubes, and the pelves of the kidneys, were considerably distended with urine. At first sight, the cyst resembled a distended and dilated urinary bladder; the true bladder, which was contracted, being like a foreign body in front. It was of considerable density; at the lower part was of the consistence of cartilage, and was lined by a very thick membrane, which was soft, white, and easily removeable. This internal cyst contained a large quantity of limpid, albuminous fluid, in which floated vast numbers of opalescent capsules, of variable size, containing numbers of the acephalocystis armatus (Goodsir). A small portion of the lowest part of the external cyst was greatly hardened, and had in close connection with it the remains of shrunk and disorganised acephalocysts, which had become converted into a mass of ochreous-coloured, friable substance. This, when examined microscopically, was found to consist of fat and granular matter, altered purulent matter, &c., changing colour, like bile, on the addition of nitric acid, and not effervescing on the addition of hydrochloric acid. Along the sides of the proper external cyst above described, muscular fibres were conducted from the bladder, giving,

at first, the idea that the parietes of this viscus were the original habitat of the animalculi; but it appeared that the cyst, from its intimate connection with the bladder, had, during its growth, drawn some of the muscular fibres along with it. The bladder was entirely healthy, and contained a small amount of highly albuminous urine. No other acephalocysts were found in the body, but in each choroid plexus of the lateral ventricles was found a substance of the size of a pea, consisting of fat, cholesterine, and a number of large rounded bodies of a greyish colour, and, when cloven, exactly like those figured by Dr. Quain in Plate III. of the Society's Volume for 1850-51. Other small and pellucid bodies, and cells of different sizes and shapes, also existed in the mass.

Dr. QUAIN presented specimens from a case of

Cancer of the Lungs, Pleura, Pericardium, Bronchial and other Glands,

And gave the following history of the case, as obtained by Mr. Dickinson, of the Brompton Hospital. A. M., aged 50, a servant and a widow, having had two children, was admitted into the hospital under the care of Dr. Cursham, on Oct. 13th. She had always lived well, and enjoyed good health, save that seven or eight years ago she vomited considerable quantities of blood. This attack appeared to have been connected with some derangement of the menstrual function. Her present illness came on seven months before her death, when she was attacked with cough and slight expectoration, with occasional pains in the chest. From this time she began to lose flesh, her appetite failed, and for the last two months she had had œdema of the legs, for which she had been subjected to acupuncture. On admission, she was pale and sallow, complaining of pain in the chest, troublesome cough, with scanty expectoration of a serous character, and of great dyspnoea, which prevented her lying down at night. She had pain in the legs, which were œdematous, and discharging, through an ulcer on each, a considerable quantity of fluid. She slept badly, and had a bad appetite. Bowels rather confined. Catamenia had ceased for the last two years. Hair black; eyes grey; fingers not clubbed; pulse 68; respirations 32. Felt very weak and low; was very irritable, obstinate, and anything but communicative. On examining the chest, the right side was found to move but little; it was an inch and a half more in its circumference than the opposite. There existed great and universal dulness over the whole side. The vocal vibration was not felt, and respiration was not heard a

parts. Over the upper parts of this side, more especially behind, in the supra and intra-scapular regions, there was a remarkably loud bronchial breathing, with bronchophony. On the left side there was dulness, and a peculiar prolonged respiratory murmur. Over the heart there was heard, with the impulse, a rough, almost rasping sound. She continued to get worse; about ten days before her death the left arm became considerably swollen and œdematous. The dyspnoea increased; and, after about a month's stay in the hospital, she gradually sank.

Post-mortem.—Body not particularly emaciated; œdema of the left arm as high as the elbow, and of both legs as high as the hips; on the outer side of the left leg was a simple ulcer the size of a shilling, and, on the right leg, the cicatrix of another as large as a crown-piece. The mammae were atrophied. On opening the chest, the right lung was found adherent to the wall of the cavity at the base by a strong band. At the left side there were some slight old adhesions. In the right pleural cavities there were three pints of sero-sanguineous fluid; in the left, scarcely any. The costal pleurae on both sides were studded with small, flattened, hard laminae, varying in size from a split pea to a sixpence. There were also a few calcareous particles the size of peas beneath the costal pleurae. The right lung weighed 29 oz., was contracted in all its dimensions, and its surface irregularly studded with small, projecting, firm masses. On cutting into these, the whole lung was found to be closely studded, more particularly at the base, with similar masses. These varied in size from a small pea to that of a walnut, and were more distinctly bounded at their margins than are similar masses of tubercle. They felt solid and firm, but were easily crushed between the fingers, and were of a pinkish-white colour. The vessels and bronchi throughout the lung were remarkably patulous. The left lung weighed 19 oz., was about the natural volume, and contained several masses similar to those in the right lung, but smaller. There was grey hepatisation of a small portion at the base of this lung. The heart weighed 11 oz. Beneath the visceral pericardium, more particularly at the base, were observed a number of flattened, firm patches, in size from a flattened pinhead to a sixpence. These masses rendered the surface of the pericardium rough; and, on cutting into them, they were found to intrude but slightly on the muscular tissue. There was some thickening of the left and right auriculo-ventricular valves, more particularly of the left. Above the root of the lungs there was found a large mass of the

same morbid matter. This mass extended to, included, and compressed the trachea, and more especially the arteria innominata and the left vena innominata. The thoracic surface of the diaphragm presented several flattened masses on its surface, and a mass of the same matter as large as an egg occupied the lower part of the anterior mediastinum. The liver weighed 40 oz.; was healthy, but congested; spleen small, weighing but $2\frac{1}{2}$ oz.; pancreas small. The kidneys weighed each $5\frac{1}{2}$ oz., and were healthy, but congested. The mucous membrane of the alimentary canal was much congested. The lumbar lymphatic glands contained matter similar to that described in the lungs. The uterus contained in its substance a small mass of deposit similar to that found in the lungs. Portions of the morbid matter from nearly all the situations in which it existed were examined with the microscope, and found to consist of cells and a stroma or basis. The fully-developed cells were about twice or thrice the size of blood-globules, generally spherical or oblong, and contained large, well-marked nuclei, granules, and oily particles. Some of these cells presented a peculiar appearance—a vacant space from which nuclei seemed to have escaped. The stroma was remarkable for the fineness of the fibres of which it was composed; these were irregularly disposed. Dr. Quain remarked, that this case presented a good example of primary cancer of the thoracic organs. The morbid appearances were very characteristic, and it was well to direct attention to these cases as guiding us to the diagnosis of these often obscure affections of the lungs.

Dr. QUAIN presented also a specimen of *Fatty Degeneration of the Heart, causing Death by Rupture.*

The heart, for an opportunity of examining which, as well as for several details of the case, he was indebted to Dr. Drury, was removed from the body of a lady of rank, aged sixty-eight years. This lady had been peculiarly subjected to distressing accidents in her family, which had naturally caused her much mental anxiety. For the last ten years she had been remarked as being nervous and irritable, frequently passing her nights without sleep. She latterly felt most things a trouble to her, and two years ago left Tunbridge Wells, owing to the inconvenience which the hills of the district caused her. She frequently complained of being bilious, and referred to the sternum as the seat of heaviness and oppression. She had occasional cough, with expectoration. Her usual medical attendant (Mr. R.F. Brown) informed him (Dr. Quain), that though

frequently complaining, she was never regarded as being seriously ill, and that some two or three years ago or more he had attended her for two or three small abscesses which had appeared on her neck. About six or eight months subsequently, whilst this gentleman was attending some other member of the family, this lady requested him to feel her pulse, observing, that she was "sure it was not a good one." He found it irregular and uncertain in its action. This state of pulse disappeared during a short attack of bronchitis which occurred soon afterwards, but re-appeared as his patient got well. The pulse during this time was between 70 and 80. During two months before her death she was staying at Brighton, and whilst there complained of general *malaise*, of numbness of the fingers of the left hand, and of a tingling or uneasy sensation over the surface generally. She consulted a medical gentleman, who attributed her ailment to nervousness. She returned to London in this condition on October 10. October 19, at half-past six in the morning, she had a rigor, with nausea and "spasms in the stomach," which lasted half an hour, and were so severe as to bend her double. She was relieved by sinapisms, mild anti-spasmodics, and rose at her usual hour, 8 A.M., to breakfast. Mr. Brown saw her subsequently, and found the pulse had altered from a full, though uncertain and irregular beat, to a small and contracted one. In the evening she was better. At 9 P.M., however, she had a second and a more severe attack. The pain extended to the back. She passed a quiet night. October 20, the bowels were relieved by castor-oil early in the morning; and at half-past ten she had a third attack. She was sick twice during the day, and expressed her conviction that she was more seriously ill than was supposed by her family, and that she should die suddenly. At 10 P.M. she was seized while lying in bed, and about to take some arrow-root, with a forth spasm. She shrieked loudly, raised herself in bed, or attempted to do so, and died instantly.

Post-mortem.—The body generally abounded in fatty tissue. The organs were healthy, except those about to be mentioned. The pericardium was distended by sixteen ounces of blood partly coagulated. This blood had escaped from a rent in the anterior wall of the left ventricle one inch in length, parallel with and close to the septum. There was no very great amount of fatty growth on the heart, but in the neighbourhood of the rupture, and onwards to the apex, the muscular fibre had undergone fatty degeneration to a very marked degree [specimens of oil-globules within the

sarcolemma were shown under the microscope]. It was of interest to observe that other parts of the heart showed the muscular fibre to be in a remarkably healthy condition. There was thus, in fact, almost a local or circumscribed degeneration, which, it was further of interest to observe, was connected with a branch of the coronary artery distributed to this part of the heart, and which was nearly occluded by calcareous degeneration of its coats. The liver was greatly enlarged and fatty.

Dr. Quain said, that the present was an extremely good example of this morbid condition, which had been, as he thought, very appropriately named fatty degeneration of the muscular tissue of the heart, as distinguished from the mere growth of fat on the surface, and also of one of the conditions, viz., obstructed circulation in the coronary arteries, on which this morbid state depends. It was likewise a good illustration of the connection between rupture of the heart and fatty degeneration of the fibre. He remarked, in reference to the diagnosis of this affection, that there were sufficient facts in the preceding history, if attention had been directed to them, to justify more than a suspicion of the existence of this or of some allied state of the heart's texture, which then might have obtained further attention and watching. He, and not only he, but others, had found many of these cases, in the earlier stages, amenable to treatment, while, in the more advanced, a knowledge of this existence led to those precautionary measures being adopted, which would in many cases protect life from a sudden termination, a result which had been made familiar to the public by several remarkable instances of the occurrence of this calamity during the last few months.

Hospital and Infirmary Reports.

HÔPITAL DE LA CHARITÉ, PARIS.

Hemito-neuritis and its Treatment—Notice of a particular Species of Neuroma, consecutive on Neuritis. Under the care of Prof. PIORRY. Reported by Dr. ARAN.

NEURALGIA and neuritis are two morbid conditions, or, to use the expression of M. Piorry, two organo-pathological states, which have between them certain relations creating great difficulty in their recognition at the bed-side. If the best treatises be consulted, it will be seen that their distinc-

tive characters rest on certain shades of symptoms which it is not always easy to recognise. Both have for their principal character, pain along the course of a nerve. When the history of neuralgic affections was less perfectly known than at the present day, a means of diagnosis was found in pressure along the course of the nerve affected. If this pressure excited acute pain, it was considered to be neuritis; if it procured a momentary alleviation, it was pronounced neuralgia. Unfortunately, this mode of determining the nature of the disease was not confirmed by a rigorous observation of facts. If there be any thing well demonstrated, it is that pressure often causes acute pain when there is no doubt of the existence of neuralgia. But, it has been said, that in neuralgia the pains recur in paroxysms, whilst the peculiar character of the pain of neuritis is its continuance: it has also been remarked by M. Martinct that irradiating shootings of pain are noticed in the course of a nerve affected with inflammation. It must be acknowledged that the pain on pressure is most intense in neuritis, and that it occupies the course of the nerve; while in neuralgia it is experienced more especially at certain points,—that it is not exhausted in the latter by repeated contact,—and with regard to spontaneous pain, if it is not always continual, it is in general more persistent; but after all, these are shades sufficiently delicate to be apprehended. In the same manner in neuralgia as in neuritis, we find numbness of the member, weight, formication, and even a feeling of coldness in the affected limb. Thus, there is a certain number of cases in which the physician must hesitate for some time as to the character of the affection with which he has to deal.

If, however, to the preceding symptoms there be added redness and tumefaction of the nerve,—if, moreover, there be perceived a state of paralysis more or less complete, and occupying a greater or smaller extent of the affected member, no doubt can remain that the case is one of neuritis; although in neuralgia there would be a certain degree of difficulty in the movement,—a semi-paralysis (according to the expression of Cotugno). Add to these last signs, that in neuritis, there are generally present certain general symptoms of inflammation (called by M. Piorry, *hemide*), characterised principally by augmentation of the fibrine of the blood, by a febrile condition, by headache, and by more or less marked derangement of the digestive organs, phenomena which do not ordinarily attend neuralgia; hence the name *hemito neuritis*, by which M. Piorry designates perfectly characterized neuritis.

Although neuritis must be regarded as a rare affection, M. Piorry has had opportunity of showing several interesting cases within a few months, and to these he has drawn attention in a clinical lecture, the most important points of which are here given with the narration of a case that presents the most characteristic features of the affection.

CASE.—In the Ward, St. Anne, in the *Hôpital de la Charité*, there has been since the twenty-third of last March, a patient, aged twenty-nine years, a sempstress, of a dark complexion, rather thin, habitually regular, of a nervous temperament, having a good constitution, and having been subject for seven or eight years to intermittent fever which recurred at the beginning of each year and lasted one month. This she attributed to a residence at Troyes in Champagne, a town where ague is very frequent. In the month of May 1849, she arrived at Paris, and experienced an attack of intermittent fever, complicated with severe cough, for which she was admitted into La Pitié, under the care of M. Piorry. Four days afterwards she was attacked with cholera, from which she recovered. About this time she observed an enlargement of the abdomen, and it was soon evident that she was the subject of ascites; this lasted eleven months, during which period she was four times tapped, and a very considerable quantity of fluid removed each time, at the first about a pailful, at the second nearly two, and at the third time between two and three pailfuls of fluid. Although this dropsy appeared to be connected with paludial cachexia, the ague did not occur during its course; nevertheless the patient was largely dosed with sulphate of quinine, and, according to her statement, the spleen had very slightly decreased in size. After a fourth tapping the dropsy appeared for a time to be arrested; the catamenia, which had been absent nine months, reappeared. Under these circumstances, M. Piorry had advised the patient to return home and continue the use of quinine in large doses: this she had done during three months, adding thereto the use of drastic purgatives and butter-milk, a common remedy in the country, and of which she drank a bottle daily for three months. Under this treatment the remaining fluid was absorbed, and the spleen had regained its normal dimensions.

The disease had made a deep impression on the health of this young woman. From this time she remarked that she had shortness of breath on running up stairs; the catamenial discharge became thin and watery, and she became subject to profuse leucorrhœa. She continued her employment

until within the last three months and a half, when, in consequence of exposure to cold, she was seized with severe pains in the neck, and difficulty in its movements. For nineteen days she was tormented with a painful lateral distortion of the neck, which left her neither rest nor sleep. Blisters were applied, pills of belladonna were given, and frictions with cyanuret of potassium were employed, and at last produced some alleviation. There was nevertheless extreme sensibility of the surface on exposure to the air, so that she was obliged to be very carefully covered when she went out. From another exposure to a draught of cold air she suffered a severe relapse.

On admission, on the 24th of May, it was seen that the right shoulder was lower than the left; the patient appeared to have lost the power of supporting the arm, which hung beside her. She complained of acute pain situated on the posterior part of the mastoid process on the right side, irradiating in different directions, but particularly to the cheek. This pain was traced also to the lower part of the neck, to the seat of the brachial plexus, and down the arm to the hand. This pain was increased by pressure however slight. On the arm it was only excited along the course of the median nerve. There was a general painfulness of the right arm, which was relieved by clasping the arm in both hands and rubbing its surface. In the fore-finger the pain was less troublesome than the formation, the former only occurring at intervals. These tinglings extended down the arm. The pains were subject to exacerbations. No tumour, thickening, or hardness was perceptible in the course of the nerve. Besides this, the movement of the affected limb was different; not that the pain produced any obstacle to its actions; it was simply an effect of debility; as it was placed on the bed in a state of extension, there it remained; it was necessary to use her other hand to raise it, and then she could only perform some few movements therewith. The general state of the patient was not bad, although the face expressed suffering; she was feverish; the pulse 90, and strong; the skin was hot. She was bled from the arm, and a blister plaster was applied to her neck; the blood was slightly cupped.

On the 26th, thirty leeches were applied along the arm. These gave great relief. Sinapisms, vesications, and anæsthetics, were used for this limb and gave temporary relief. Circumscribed painful spots remained on the course of the ulnar and median nerves. There was some degree of numbness of the thumb and finger. The irritability of the muscles was preserved in its integrity. The movements of the arm were still impaired. The patient's aspect

was anæmic, and bruits were heard in the vessels of the neck.

It was evident that this was a case of neuritis, and not one of neuralgia. There was in this instance almost complete paralysis; in order to flex the limb it was requisite first to bring it into a state of forced pronation. The case was to be distinguished from neuralgia by the persistence of the pain, and its increase every evening, by the presence of numbness down the arm and fingers, and by the occurrence of general febrile symptoms which are not usually observed in neuralgia. There was no distinct sign of redness or swelling along the course of the nerve, but the circumscribed paralysis was a more important symptom of neuritis than redness or swelling, which are not easily detected along the course of a nerve.

A curious phenomenon that has been pointed out by M. Piorry may here be noticed. In the progress of neuritis small tumours, varying in size from that of a grain of corn to that of the finger-end, are developed along the course of the nerve, seldom attended with discoloration of the skin, painful on pressure, and forming centres of painful irradiation. These tumors are *neuromata* or *neurosinies*, and are interesting, inasmuch as their extension demonstrates the error of regarding neuroma as a cancerous disease. They are sometimes found to the number of twenty or thirty along the course of a nerve. The treatment that succeeded after six months in a case seen by MM. Piorry and Bouillaud, consisted in local bleeding, blistering, narcotics, and vapour baths.

Neuritis is generally caused by the sudden impression of cold and moisture. It occurs also as the result of injuries of various kinds. Its treatment consists in local depletion, vesicatories, and anæsthetics or narcotics locally applied. Probably electricity would be of service either by influencing the sensibility of the skin or by exciting the semi-paralysed muscles.

Correspondence.

ON VITAL MAGNETISM.

SIR,—In the early part of this year, Mr. Herbert Mayo called attention to the vibrations which a gold ring undergoes, when suspended by a silk thread from the forefinger or thumb of the right hand, over a metallic surface, such as a heap of coins placed on a table. I have not had an opportunity of seeing Mr. May's original communication, but I read a short

notice of his experiments in Galignani's Journal, and subsequently saw a paper on the subject in Chambers' Journal, in which some other facts were added, but doubts were expressed by the editor whether the motions might not be due to some involuntary actions of the operator; and this doubt seems to have prevailed very generally amongst his readers.

On testing the experiments with every precaution I could devise to avoid this fallacy, I became convinced that the described motions were not due to this cause; and as the subject seemed worthy of further investigation I have since paid a good deal of attention to it, and have at length arrived at some results which are both novel and important. Some of my experiments I will with your permission relate, and will then state the conclusions that seem necessarily to flow from them.

Experiment 1. Fasten a gold ring to one end of a silk thread about a foot long, and coil the other end round the nail joint of the forefinger of the right hand; rest the elbow on a wooden or marble table, extend the finger horizontally, with its palmar surface downwards, so that the ring shall hang about an inch above the table, and close the thumb and other fingers. Do all this easily, and without using any strong muscular effort to steady the hand, and soon the ring will be seen to begin to oscillate *longitudinally*; that is, in the direction from the forefinger to the elbow.

2. The ring vibrating as above, let the operator now raise his left hand parallel to the right, the fingers extended, and palmar surface downwards, bringing it over the table and rather nearer to the right hand than this is to the right elbow. The ring will cease to vibrate longitudinally, and will oscillate *transversely*, from the right towards the left hand.

3. The like *transverse* vibration will ensue, if instead of raising the left hand, we extend the thumb or one of the other fingers of the right hand parallel to the forefinger, the motion then being from one finger towards the other.

In making these experiments, care must be taken not to use a strong muscular effort to steady the hand, the reason for which will be seen in a future experiment; if necessary, steadiness may be obtained by resting the wrist, or the ulnar side of the hand, on a book or other support, and in this case it will be best to interpose some flannel or the coat sleeve between the hand and the support.

4. If instead of bringing forward the left hand, as in exp. 2, we extend it in the opposite direction, the vibration will continue longitudinal, but will be *increased in strength*.

5. If a second person now take the extended left hand of the operator with his right hand, his left being kept close to the body, the vibration will change from longitudinal to *transverse*: if the second person use his left hand and keep the right down, there will be first a pause in the vibration, and then *transverse* vibration will be established. In either case, however, whether the second person use his right or his left hand to grasp the operator's left hand, on extending his other arm in the opposite direction, that is away from the operator, the oscillation will become *longitudinal*.

6. If when the ring is vibrating transversely in exp. 2, we bring the left hand into contact with the right, the vibration becomes longitudinal. The same effect ensues if we touch any other part of the right side with the left hand, or cross the legs, &c.*

I have directed a gold ring to be suspended from the above experiments, but many other bodies will answer, a steel ring, a half sovereign, a glass or ivory bead, a crystal of eubical iron-ore, and a cone of sealing wax, are amongst those I have tried. Mineral bodies seem to answer best, and I think the best of these is a gold ring, not too light; a crystal of eubical iron answers very well, and I have often used it. Silver and brass have seemed to me to oscillate less freely, but the weight of the object may have had something to do with this.

Mr. Mayo directs some metallic surface, as a few coins, to be placed below the vibrating body; this is not essential, as the oscillations go on freely over a wooden table, still, they are more vigorous over a plate of metal; over flannel or woollen cloth, on the contrary, scarcely any motion takes place.

To meet the objection that these oscillations may be due to involuntary muscular action, the ring may be suspended from a pin stuck in a firm transverse support of wood, across which lay the finger on a fold or two of flannel, with the point projecting over the pin and ring. Precisely the same kind of vibrations occur, but rather less extensive in their range.

The experiment may be varied in the following way:—On a steady table let a firm upright support be placed; a candlestick will answer the purpose, and to this let us tie in a horizontal direction, and six or

eight inches above the table, a drawing pencil, or some other light wooden bar, in such a way that as much as possible of its length shall project on one side of the upright. Stick a pin into the projecting end, and from this hang by a silk thread a gold ring about an inch above the table, and place the apparatus with the transverse bar parallel to the edge of the table next the operator, and about six or eight inches from it, the ring being towards his right hand.

If the operator now take another pencil in his right hand by one extremity, and resting the wrist on the table hold the other end over the pin where the thread is attached, and as near to it as may be without touching it, the ring will soon begin to vibrate towards the right hand. When this vibration is well established, let him take a third pencil in his left hand, and resting the wrist on the table hold the pencil parallel with that in the right hand, but lower down, so that the free end may be at about an equal distance from the transverse bar and the table. The former vibration will gradually cease, and a transverse one be established. We may also employ this simple apparatus in repeating the other experiments.

There can be no doubt, I think, that in this and similar experiments, the wooden bars as well as the table acquire a polarized condition, and that this directs the ring's vibration.

Now the vibrations that I have described as occurring in the preceding experiments, can be exactly imitated,—1st, by substituting magnetized bars of steel alone for the hands of the operator; or 2nd, by combining in one experiment the action of the bar magnets and the hands of the operator, as the following observations will prove. First with the magnets alone.

7. Place on a box or block of wood, about six inches deep, a magnetized bar of steel,* about six or seven inches long, with its north pole projecting a couple of inches or so beyond the edge of the box. From the projecting extremity suspend the ring, so as to hang about an inch above the table. After the irregular motions caused by suspending it have ceased, we shall observe a *longitudinal* oscillation to become established, that is in the direction of a line drawn from one pole of the magnet to the other. This oscillation is feebler than what

* This experiment shows the necessity of attending to the position of the limbs whilst operating. In my early experiments I was more than once puzzled by finding results different from what I had before met with, until I discovered that the difference was due to my sitting with my legs across at one time and not at the other; even wearing a pair of spectacles is sufficient to change the direction of the motion.

* This may be prepared by repeatedly drawing a horse-shoe magnet from one end to the other of the bar. The magnet is to be placed with both poles resting on the bar, and to be drawn always in one direction, with the south pole in advance. The end of the bar, by which the horse-shoe magnet quits it becomes the north pole. The bars I use will support about half an ounce of steel by their north pole.

occurs in exp. 1, when the ring is suspended from the forefinger, but it is in other respects similar. With a more powerful magnet the motion would be greater.

8. Place by the side of the first magnet a second like it, with its south pole touching the south pole of the first, and its north pole projecting beyond the box, and distant three or four inches from the north pole of the other magnet. *Transverse* oscillation will take place as in exp. 2 and 3.

9. If instead of placing the second bar by the side of the former we place it end to end with it, and south pole to south pole, a like result will occur to what took place in exp. 4, when the hands of the operator were extended in opposite directions, namely, *increased longitudinal* oscillation.

10. If we place the north pole of the second magnet in contact with the south pole of the first, *transverse* vibration will ensue. The same result will follow if we apply to the north pole of the second magnet in exp. 9 the north pole of a third magnet, just as in exp. 5 we found that a third hand added to the extended two of the operator produced *transverse* oscillation; but if we add a fourth magnet with its south pole to the south pole of the third, the oscillation again becomes longitudinal; as occurred when the second person raised *both* arms in exp. 5.

11. The result of exp. 6, namely, change from transverse to longitudinal oscillation when the two hands are brought into contact, may be imitated by uniting the projecting poles of the two magnets in exp. 8 by a steel bodkin or large needle.

These experiments would in themselves afford strong grounds for believing that the vital force acting in the six first experiments is identical with the magnetic force operating in the five latter ones: this belief will obtain further confirmation from the succeeding experiments, in which the hands of the operator combine with the magnetic bars to produce similar results.

12. The ring vibrating longitudinally from the right index as in exp. 1, and the wrist resting on a box four or five inches high, place a bar magnet on the box beside the hand, with its north pole projecting forward over the edge, and the south pole touching the wrist. This position, it will be observed, is analogous to that of the hand in exp. 2, and of the magnets in exp. 8; and the results are similar for the oscillation which was *longitudinal* will change to *transverse*. The converse of the experiment may be instituted by suspending the ring from the magnet, and placing the index finger by its

side, and at a distance of four or five inches at the projecting poles.

13. The operator's hands being both extended, as in exp. 4 and 5, let him grasp in his left hand the north pole of a bar magnet; the oscillations which were longitudinal will become transverse, as when the right hand of a second person was taken in exp. 5, or when the north pole of a second magnet is brought into contact with the south pole of the supporting magnet in exp. 10. Or, the two magnets being arranged south pole to south pole as in exp. 9, and the ring therefore vibrating longitudinally, let the operator place the right index in contact with the north pole of the second magnet, at the same time keeping his left hand down; *transverse* vibration will ensue. On the operator's extending his left arm also, the same result will ensue as in exp. 5, when the second person extended both arms, namely *longitudinal* vibration. The analogy between the action of the arms and magnets in exp. 5, exp. 10, and exp. 13, will on examination be found to be complete.

We have seen in experiment 10, that by bringing the north pole of a second magnet into contact with the south pole of the supporting magnet, the direction of the vibration changed from longitudinal to transverse, and in experiment 13 we have seen the same result follow from bringing the fore-finger into contact with the south pole of the magnet; if, however, instead of causing contact, we place them only in proximity, so that one magnet shall not act on the other by induction, a different effect ensues; thus, if we place a second magnet behind, and in the same line with the first, but with its north pole over the south pole of the first, but not in contact with it, the vibration will be *longitudinal*, and stronger than when only one magnet is used. The following experiment shows a similar result when the hands are employed, and, as it is a striking one, may serve to convince those who will try it, of the reality, and influence, of this vital force:—

14. Suspend the ring from the north pole of a magnet, as in experiment 7, and observe the force of its longitudinal vibration; now hold over the south pole, but without touching it, the fore-finger of the right hand; in the course of about two minutes the oscillation will be seen to have greatly increased in extent; now lay down a second magnet parallel to the first, with its south pole projecting forward; the right hand being held as before over the first magnet, place the point of the extended fore-finger of the left hand over the north pole of the second magnet; strong

transverse vibration will soon ensue, which, on removing the hands, will at once become much more feeble. The result will be still more striking if the second magnet be placed on a lower level than the first, so as to be nearer both to the suspended ring and to the north pole of the first magnet, than this is to its south pole. This experiment may be made without touching any part of the apparatus, and be thus free from the suspicion of any voluntary or involuntary shaking of the ring on the part of the operator.

The above experiments will probably be admitted by those who believe them to be faithfully reported, to be amply sufficient to prove the existence of a force in the living body, closely analogous to, if not absolutely identical with common magnetism; to those who still remain sceptical, I can only say, "try them."

It will have been seen that in these experiments the extended finger represents one of the poles of a magnet. When employed separately each one appears to represent the north pole, whilst the centre of the body, or some point between this and the extended hand, represents the south pole.

The longitudinal vibration in experiment 1, takes place in a line drawn from the supporting hand to the elbow, and the elbow thus represents the south pole; if we now draw nearer the table, so as to bring the body in contact with it, the elbow being thrown a little outwards, we shall find the line of vibration change to one between the hand and the body, which latter point becomes the south pole. It would appear that this line on the table becomes magnetic by induction, for if a plate of iron be placed on it between the supporting hand and the elbow the strength of vibration is increased, and when the left hand is raised, as in experiment 2, the change of oscillation to the transverse, if affected at all, is affected with more difficulty than when the table alone intervenes. Again, if we place on the table below the left hand in experiment 2, some folds of flannel, no change of vibration occurs, the flannel appearing incapable of becoming magnetic by induction.

What change takes place in the magnetic influence causing the longitudinal vibration to become transverse, I am unable fully to explain. I suppose it to be due, in experiment 2, to the establishment of a new and stronger line of magnetic induction when the left hand is brought forward parallel with the right, and that the left represents the south pole, the two arms representing the arms of a horse-shoe magnet: but this will not explain the like

change in experiment 5 for instance.* I will therefore only recal attention to the fact that the changes are precisely similar whether we employ our hands or the bar magnets.

In what part of the frame this vital force has its seat cannot perhaps be considered as certain; few, however, would be inclined to look elsewhere than to the nervous system; and the following experiment, which I have frequently repeated, and invariably with the same result, will be found to confirm that opinion, and to lead us to look on the so-called nervous influence as a form of the magnetic force to which I have ventured to apply the term *vital magnetism*; the term animal magnetism having been employed for phenomena, many of which at least seem to have no connexion with this.

15. If, when the ring is vibrating from the finger, either longitudinally or transversely, we forcibly contract some distant muscles, as for instance of the jaw, or leg, the vibration ceases entirely, and is only restored on the cessation of the muscular contraction.

Hitherto I have failed in producing any effect on the magnetic needle, either directly with the hands, or indirectly by inducing in iron a state similar to that produced in it by friction with a magnet.

The directions I have given for the position of the hands in experiment 1 are minute, but they should be attended to, because the motions of the suspended body are influenced by it. For a considerable time I was in the habit of resting the supporting hand with the ulnar side towards the table, when, instead of simple vibrations, I obtained rotary motions, which I supposed to be the fundamental ones. I have, however, now no doubt that the true simple motion is one of vibration, as Mr. Mayo stated, and that the rotation is the result of the force acting in two directions, from the finger towards the elbow, and from the finger towards the ulnar side of the hand.

I am fully conscious of many deficiencies in the foregoing paper, arising in part from a want of other and more powerful instruments than I have at command, and in part from a want of familiarity with the later researches in magnetism, and of personal experience in this science: I have endeavoured to state correctly the phenomena I have witnessed, and I do not be-

* Is the longitudinal polarity neutralized by the third hand, and the polarity across the suspending hand increased? I suspect it, for if we hang the ring from the middle finger, and keep the arm extended above the table, transverse vibration occurs.

lieve that any important error will be found in my statement of facts; minor ones, if they exist, the future experience of others will correct. The inferences I have stated are but few, and such as seemed almost inevitably to follow from the premises.

Any further observations would seem to me unnecessary at present, and as this letter has already extended to a considerable length, I will conclude by subscribing myself,—Sir, your obliged servant,

DREWRY OTTLEY.

Pau, Nov. 6, 1851.

*** This letter has been forwarded to us for publication by a physician of good experience and scientific knowledge. We express no opinion of the results: but the term *magnetism*, as applied to these phenomena, appears to be singularly inappropriate. Magnetism cannot be imparted to, or indicated by *gold*; while a gold ring is described as being better adapted than any other body for the manifestation of the vibrations, &c. On the other hand, the magnetic needle is a most sensitive test of magnetism; while we are informed by Mr. Ottley, that his experiments produced no effect on the needle, either directly or indirectly. We are living in an age of wonders—guns are fired on the cliffs of Dover by a galvanic current sent in less than a second under thirty miles of sea from the opposite coast of France. The portrait of a respectable gentleman, including whiskers and eyelashes, is transferred by light in a second of time to a plate of silver; and the quantity of sugar contained in the urine of a diabetic patient is actually measured by a ray of polarized light. Any one of these feats would have led to the judicial combustion of the inventor in Smithfield two hundred years ago: their effect at the present time is to make us cautious in what we admit and what we deny.

ENGLISH SURGEONS AND SCOTCH REVIEWERS.

SIR,—I have just read in the Edinburgh Monthly Journal of this month, an article professing to be a review of Mr. Cooper's Surgical Lectures,—I say professing to be a review, because in reality it is no such thing: it is simply four and a half pages of

vulgar scolding, capped in the last paragraph by an imputation so base, that one really is left with a wholesome contempt for the pitiful meanness of the man who could write it. No one objects to impartial criticism of a book, however severe it may be, but I do not think the readers of the Edinburgh Journal have any desire to see its pages occupied by tiresome personal abuse, unredeemed by any grace of wit or point of sarcasm.

As conductors of this Journal I see the names of the heads of the profession in Edinburgh: every medical man of right feeling must be grieved that such an article as this so-called review goes forth to the world under the sanction of such names. With this example of jealousy or ill-conditioned malice before him, who can avoid a bitter smile at the idea of medical reform?

I believe I am right in saying that the profession looks upon the Edinburgh Journal as a publication of great value, and one which has long enjoyed and deserved a high reputation: its conductors have but very recently taken an open and manly part against Homœopathy; they would do equal service to their profession, and much enhance the value of their Journal, if, in future, they would not allow its pages to be the medium of personal vituperation, as tedious and valueless to the reader, as in itself it is childish and contemptible.—I remain, sir,

Your obedient servant,

A COUNTRY SURGEON.

December 4th, 1851.

*** The author of the ill-natured article, miscalled a review, is very well known. He cannot write of a brother surgeon in a charitable spirit, even by accident. He has suffered so much from criticism himself, that he can henceforth deal out nothing but gall and bitterness to others.

OBITUARY.

On the 3d inst., at his house, 29, New Broad Street, after a long illness, Algernon Frampton, Esq., M.D., of St. John's College, Cambridge; Fellow of the Royal College of Physicians; and for many years Physician to the London Hospital; in his 49th year.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 4th December, 1851:—Alfred Howse, Western General Dispensary—Robert Hicks, Baldock, Herts.

APPOINTMENT OF LIBRARIAN TO THE RADCLIFFE LIBRARY, OXFORD.

WE have great pleasure in announcing that Dr. Aeland has received this appointment. The Trustees have, we think, acted most judiciously in appointing a medical man to take charge of a scientific library founded by a *physician*. Dr. Aeland has already shewn that he is fully qualified for such an office by the improvements which he has made in the Anatomical Museum of Christchurch.

THE MEDICAL SCHOOL OF THE UNIVERSITY OF CAMBRIDGE.

THE Lectures on Anatomy and Chemistry delivered in the Medical School of this University, are now recognised by the courts of Examiners of the Royal College of Surgeons, and the Society of Apothecaries; so that students may pass the first winter session, agreeably to the curriculum of those bodies, in Cambridge. The second and third winters must be spent in London, or elsewhere. The Hospital has long been recognised; and lectures are delivered on Medicine, Surgery, and other subjects. By this arrangement further inducement is offered to medical students to connect themselves with one of our Universities; for, in addition to the opportunity of acquiring a superior general education, and other advantages of studying in a University, they may proceed to take a degree in medicine, or may be qualifying themselves to practice in the other branches of the profession.

Candidates for the fellowship of the College of Surgeons who have taken the degree of Bachelor of Arts in an English University, are required to have been engaged for *five* years instead of *six* in the acquirement of professional knowledge, and are not required to produce any further certificate of knowledge in Greek, Latin, &c.

Lectures on all the natural sciences collateral to medicine are delivered in the University; and in the last year an Honor Tripos for the natural sciences has been instituted corresponding to the mathematical and classical Tripos, so that the student has an opportunity of distinguishing himself in any or all of these sciences.

BOOKS RECEIVED FOR REVIEW.

An Introductory Address delivered at the King's College, London. By William Bowman, F.R.S. &c.

Physiological Researches. By Sir B. C. Brodie, Bart. D.C.L. F.R.S. &c.

The Pocket Formulary, or a Synopsis of the British and Foreign Pharmacopœias, &c. By Henry Beasley. 5th Edition.

On Improving the Condition of the Insane. By Henry Monro, M.B. Oxon.

Inaugural Address delivered at the Opening of the Sydenham College, Birmingham. By J. B. Hayes, Lecturer on Anatomy, Physiology, and Pathology.

Familiar Letters on the Physics of the Earth, treating of the chief Movements of the Land, the Waters, and the Air. By H. Buff, Professor of Physics, Gies-sen. Edited by A. W. Hoffman, Ph. D. F.R.S.

BIRTHS & DEATHS IN THE METROPOLIS During the Week ending Saturday, Dec. 6.

| BIRTHS. | | DEATHS. | |
|-----------|------|-----------|------|
| Males.... | 788 | Males.... | 624 |
| Females.. | 740 | Females.. | 692 |
| | 1528 | | 1316 |

CAUSES OF DEATH.

| | |
|--|------|
| ALL CAUSES | 1316 |
| SPECIFIED CAUSES | 1311 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 249 |
| <i>Sporadic Diseases, viz.—</i> | |
| 1. Dropsy, Cancer, &c. | 48 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 149 |
| 4. Heart and Bloodvessels. | 49 |
| 5. Lungs and organs of Respiration | 333 |
| 6. Stomach, Liver, &c. | 62 |
| 7. Diseases of the Kidneys, &c. | 6 |
| 8. Childbirth, Diseases of Uterus, &c. | 10 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 6 |
| 10. Skin. | 1 |
| 11. Premature Birth | 0 |
| 12. Old Age | 76 |
| 13. Sudden Deaths. | 4 |
| 14. Violence, Privation, Cold, &c.... | 38 |

The following is a selection of the numbers of Deaths from the most important special causes:

| | | | |
|--------------------|----|------------------|-----|
| Small-pox..... | 27 | Convulsions..... | 51 |
| Measles..... | 17 | Bronchitis | 156 |
| Scarlatina | 44 | Pneumonia | 133 |
| Hooping-cough.... | 30 | Phthisis | 180 |
| Diarrhœa..... | 26 | Lungs | 8 |
| Cholera..... | 1 | Teething | 9 |
| Typhus..... | 61 | Stomach | 9 |
| Dropsy..... | 19 | Liver..... | 12 |
| Hydrocephalus | 30 | Childbirth | 5 |
| Apoplexy..... | 25 | Uterus | 5 |
| Paralysis | 30 | | |

REMARKS.—The total number of deaths was 194 above the average mortality of the 49th week of ten previous years.

METEOROLOGICAL SUMMARY.

| | |
|---|-------|
| Mean Height of the Barometer | 30.13 |
| Thermometer ^a | 38.8 |
| Self-registering do. ^b Max. 0.0 Min. 22. | |
| ^a From 12 observations daily. ^b Sun. | |
| RAIN, in inches, .03. — Sum of the daily observations taken at 9 o'clock. | |

METEOROLOGICAL.—The mean temperature of the week was nearly 1° below the mean of the month.

NOTICES TO CORRESPONDENTS.

Mr. Warren's interesting communication on Rupture of the Uterus has been duly received. We have to acknowledge the receipt of letters and papers from Dr. Frazer, Sir G. Ballingall, Mr. Waterworth, Dr. Fearnside, Mr. Tucker, Mr. Milton, Mr. Humphrey, Mr. Richardson, and Mr. C. S. Bate.

Corrigendum.—In our report of the Liverpool Pathological Society, in our last number, at page 985, insert the name of Mr. EDOWES as the author of the paper "On Traumatic Mania," page 985.

Lectures.

CLINICAL LECTURE
ON
VARIOUS CASES.

(Delivered at King's College Hospital. Dec. 1850.)

By R. B. TODD, M.D. F.R.S.
Physician to the Hospital.

[Reported by LIONEL S. BEALE, M.B., Medical Associate of King's College, London.]

LECT. XXVII.

Review of cases in hospital—Case of renal epilepsy, with lead palsy—Source of the lead poisoning—Treatment by elaterium, blisters, hot-air baths—Case of lepra—treatment by tar—Case of injury to the muscles of the loins, with subsequent paralysis—remarkable iodism—resultant caries—Case of typhoid fever—treatment of fever—Case of epilepsy—loss of memory after three fits—A second case of lepra—antidotal and eliminative treatment—Case of meningeal and cerebral inflammation—paralysis with rigidity of muscles—Contrast with a case of paralysis with relaxation of muscles—Cases of gout, and of hydatid of the right lung.

GENTLEMEN,—I propose to-day to take a rapid survey of some of the most important cases at present under my care in the men's wards. I shall make a few remarks on each in succession, and put you in possession of its main features, that you may be able to watch its further progress with the more interest; and I shall be able to speak to you with more freedom here respecting points which cannot be conveniently discussed in the ward, or within hearing of the patient.

Commencing, then, in Fisk Ward, we find a man of the name of Clarke (vol. xxxii. p. 21), who was admitted here about two months ago. This case exhibits an example of two very interesting and highly important classes of disease—epilepsy, and the effects of lead poisoning. He was admitted in a state of profound epileptic coma; and, from October the 18th to 20th, had five convulsive fits, accompanied and followed by coma, which continued for two days, when he began to recover.

The long continuance of a state of profound coma is always calculated to excite anxiety in the friends and attendants of a

patient, and to create fear lest some extensive mischief shall have been done to the brain. In this case there were two circumstances among others which greatly encouraged me to believe that no serious organic lesion existed in that organ. The first of these was, that the coma was accompanied with convulsive fits. Now you will not understand me to say that I do not apprehend danger from such paroxysms of epilepsy as this man has had; but that, when epileptic convulsions and coma occur together, and where there is no hemiplegic paralysis, we have a good deal of presumptive evidence that there is no apoplectic clot, or other organic lesion likely to damage the brain permanently. Thus we were led to ascribe both the coma and epilepsy, not to the pressure of a clot upon or within the brain, but probably to one and the same cause, which cause was suggested by the second circumstance to which I have referred—namely, that his urine was scanty in quantity, and highly impregnated with albumen.

Thus I viewed the case as one of those in which the cerebral affection was due to the presence of some irritating matter in the blood which ought to be eliminated by the kidneys. There are very good grounds for believing that urea in the blood is capable of affecting the brain so as to cause coma and convulsions. Other substances retained in undue quantity may produce the same effect, for aught we know; and certainly, coma and convulsions may occur in cases where we have no evidence of the presence of urea in the blood; but it is quite as certain that, when the kidneys fail in their action to secrete only an ounce or two of urine in the day, instead of thirty or forty ounces, coma and convulsions are very apt to ensue.

And in such cases we get proof of the presence of urea in the blood as we have done in this case. The following is the method which was pursued for this purpose:—A blister was applied to the back of the neck; and when it rose, the serum was carefully collected, and tested for urea. The whole quantity of serum was evaporated to dryness over a water-bath, and the residue was extracted with alcohol, which is a ready solvent of urea. This alcoholic extract is then evaporated to dryness, and a little water added so as to make a spongy mass, which is plunged into a freezing mixture, and a few drops of pure nitric acid are added. If urea be present, the characteristic crystals of nitrate of urea are soon formed in the solution, and are at once recognised either by the naked eye or by the microscope.

Our patient is an intemperate man, and filled the place of a waiter at a low tavern.

We have not been able to trace any immediate exciting cause of his present attack, except exposure to cold shortly before. It is probable that, under the influence of his habits of intemperance, renal disease had been making insidious progress for some time; but, on exposure to cold, the action of the skin being checked, an acute affection of the kidneys was induced, those organs became highly congested, their tubes, filled with epithelium, allowed but a small flow of urine, already curtailed in its quantity and charged with serum, whence its albuminous impregnation. This defective excretion of urine allows urea to accumulate in the blood, which, passing to the brain, so far disturbs the nutrition of that organ as to excite convulsions and coma.

As soon as recovery from the state of coma took place, we observed a paralytic affection of the upper extremities, and of those alone; the legs were in no way involved; nor were all the muscles of the upper extremities paralysed; those of the arm and shoulder were only very slightly affected; the muscles of the forearm were chiefly engaged, and of these the extensors were most distinctly paralysed. All were wasted; but the extensors most so, as was obvious from the hollow which existed over those muscles on the back of the forearm. He could flex the wrist and grasp with his fingers, but very feebly, and he was wholly unable to extend the wrist or the fingers. When the arm was stretched out from the trunk, the hand hung as if lifeless from its articulation at the wrist. Both upper extremities were affected in precisely the same way, although not precisely to the same degree; for the right forearm was evidently weaker than the left. The muscles which form the prominence of the ball of the thumb (the *thenar* eminence of surgical anatomists) were also paralysed and greatly wasted, so that the power of flexion, or extension, or adduction of the thumb, was almost entirely destroyed.

It is plain that in this case there were two classes of symptoms with which we had to deal—a more acute class, which yielded pretty readily to treatment, and which must have destroyed the patient sooner or later if they had not given way; and a more chronic, which remained after the first had been removed, and which seemed to have no tendency to shorten life. The first were the coma and convulsions—the second, the palsy.

Viewing the first and acute class of symptoms as indicative of the state to which I have given the name *renal epileptic coma*,* I adopted a treatment actively eli-

minatory, with the view to remove by other channels, as much as possible, the material which was irritating the brain. The channels through which I endeavoured to conduct this noxious matter were the intestinal mucous membrane and the skin.

His head was shaved, and he was freely blistered over the scalp; mustard cataplasms were applied to the back of the neck, and he was very freely purged. The best purgative to use in such cases is elaterium, because it acts promptly, and produces liquid stools, carrying off large quantities of serum from the system, which, no doubt, as that obtained from the blister did, contained urea. Warm baths, or hot air baths, may often be used with great advantage in these cases; but I did not use more than one of each in our patient Clarke's case, as I thought him too weak to subject him much to remedies which, especially the latter, have a decidedly depressing influence.

He was admitted on the 18th of October; on the 22d he was quite free from any comatose symptom, and there now remained to be dealt with the condition of the kidney (the *fons et origo* of the cerebral disturbance), and the paralytic state.

The urine had increased considerably in quantity: it was still, however, very highly albuminous, becoming almost solid by heat, and of low specific gravity; and, under the microscope, contained casts of tubes and epithelium, and some blood particles. It was plain that, whatever might have been the former state of the kidney, it was *now* very much irritated, and that the defective secretion and albuminous impregnation were due to this.

The condition of the kidneys has improved greatly in this case under the use of purgatives, at first elaterium, and afterwards compound gamboge pill, and also of warm baths; so that now the urine contains very little albumen; but the paralytic state has remained very little changed.

It exhibits precisely the character of that form of palsy which results from lead-poisoning, more commonly known as the "painter's wrist-drop." All the very characteristic signs of this form of palsy were as well marked in this case as in any case I have ever seen. When you make him hold out his arms, you see both hands hang down, and he has little or no power to bring them to the state of extension.

A practical man could not see such a case without asking if the man was a house-painter. Yet we found, on inquiry, that not only was he not of that trade, but that his proper vocation, that of a waiter, did not particularly expose him to the lead contamination.

Can the palsy be due to any particular

* Lectures on Delirium and Coma, LONDON MEDICAL GAZETTE, 1850.

lesion of the nervous centres, independently of lead? Or is it the result of the renal disease? It cannot be the latter, for it existed before the attack of coma, and its origin dates as far back as four or five years, and was preceded by two attacks of which he gives but a very imperfect account, but which were attended with obstructed bowels and severe pain in the belly—attacks resembling lead colic. He was at this time in Devonshire; but he states that he did not drink cyder.

I do not think that the palsy can be attributed to any special lesion of the nervous centres. I know of none which would produce exactly this form of paralysis—so symmetrical—affecting particular classes of muscles in preference to others, and those of the forearm especially, and without any damage to sensation.

We are driven, then, to attribute the palsy to contamination by lead; and, in confirmation of this, we have found the blue margin to the gums, pointed out first by the late Dr. Burton. The blue line is not uninterrupted, for he has lost several teeth, and at these points it ceases; but wherever there is a tooth, or a stump projecting above the gum, there the blue line is distinct.

But the difficulty in this case has been to explain how the lead came to be introduced into the system. It is true we are exposed to this contamination from the water we use, and we shall be so as long as there are leaden cisterns and leaden pipes to convey the water. In time it may be hoped that glass may be substituted, or some other substance not likely to yield up poisonous matter to the water. The wonder is, not that an occasional case of this kind occurs, but that they are not infinitely more frequent. Some people, no doubt, exhibit the idiosyncrasy of being strongly affected by very small quantities of particular poisons, which it is generally necessary to administer in much larger doses to produce the specific effects. We see this often in the use of mercury and of iodide of potassium. It is possible that this man may have this idiosyncrasy as regards lead.

But I think we have a better explanation than this. It appears that a part of his duty has been to clean and keep bright the pewter pots belonging to the public house to which he is attached. This he does by friction with the hands. Now pewter very commonly contains lead in considerable quantity; and no doubt the frequent contact of this with the hands would lead to a gradual absorption of a sufficient quantity of the metal to produce the poisonous effects; or the repeated frictions might cause the separation of minute metallic particles, which might be inhaled.

Now the palsy from lead is most pro-

bably due primarily to the contamination of the muscles by the lead: they thus suffer in their nutrition, and the nerves, especially the motor nerves, suffer in consequence of their comparative inaction. Doubtless, after long exposure to the contaminating influence, the nervous matter itself will become poisoned, and thus in such cases brain symptoms ultimately show themselves. But the palsy may be regarded as a form in which the loss of motion is in the first instance due to a diseased state of the muscles themselves,—not, as is generally the case, to disease of the nerves, or of the nervous centres.

The theory of lead palsy, which refers it to lesion of the spinal cord or brain, evidently will not account for the phenomena. It will not account for the muscles of the forearms being chiefly affected; nor will it explain the greater amount of weakness on one side than on the other; nor the greater palsy and wasting of extensors than flexors; nor the special affection of the muscles of the thumb; nor, in fine, the almost total exemption of the nerves of sensation amid so much injury to the motor function. Moreover, I think it may be affirmed with perfect truth that a lesion of the spinal cord sufficient to create so much palsy of the upper extremities as we often see in such cases as these would necessarily affect other parts also; whereas this man Clarke has full power of his lower limbs, his mind and senses are perfectly clear, and he has no symptom of any nervous affection besides the palsy of the upper extremities.

I have already explained to you the treatment adopted in this case for the renal disease. Fortunately, that necessary to remedy the effects of the lead poisoning is much of the same kind. He has had frequent sulphur baths, with evident advantage to his general health. I have seen many instances of great improvement to the state of lead cachexia following the long-continued use of sulphur baths. He has also gone through a long course of galvanism with very little benefit: he has had one arm fixed upon a splint, according to Dr. Pemberton's plan, whilst, for the sake of comparison, the other arm was left free. It was evident after this treatment that the arm which had been bound up was worse than before. On the whole, the lead palsy is very little better than on his admission; nor is it to be expected that it should have been otherwise in so short a space of time. The poison of lead damages the muscles so much, that it requires a very long time before any marked change takes place: and I do not know that any one remedy exercises a specific influence; but there can be no doubt that all those hygienic means which contribute to promote a sound gene-

ral nutrition are the most useful in aiding the recovery of the patient.

Case of Lepra.—The next case we meet with is that of Cope (vol. xxxi. p. 44), upon which I shall not dwell much just now. I only notice it to call your attention to the progress the patient has made. He has been in the hospital nearly a month, and for three weeks has been on the tar system. Wood tar, or Archangel, is the proper preparation for these cases: mineral tar was given by mistake in this case, and caused great irritation of the bowels. A convenient mode of administering the tar internally is in capsules, each containing fifteen minims, and he takes one three times a day: the tar is also applied externally over the patches by means of a brush, and the patient is kept constantly in tar sheets, that he may receive all the benefit possible from this plan. From time to time he has a bath to wash off the tar, in order that we may see the progress he is making. If you administer the tar in capsules, take care that the materials of which they are made are easily soluble, else they will pass through the bowels, tar and all, untouched. The first capsules that were given to this man were made of animal membrane; they did not dissolve, and he found that they came away in the stools. On changing them for capsules of gelatine, they ceased to appear in the stools, and the patient was conscious of their being dissolved in the stomach by the eructations tasting of tar. You may now observe in Cope that the spots are beginning to heal, and you should notice the mode of healing, which is characteristic of lepra, commencing in the centre, and spreading outwards to the circumference. Many of the patches have quite disappeared, and there is every prospect of the patient getting quite well, for a time at least; but the difficulty is, to prevent the recurrence of the eruption, and to effect a radical cure.

The third case on my list is that of Benjamin Matthey (vol. xxxi. p. 136), now in Fisk Ward. The case is very remarkable in some points, and its real nature is obscure. He is 25 years of age; he comes from Woolwich, and works in the arsenal there: with the exception of an attack of ague four years ago, when he first went to Woolwich, he has enjoyed good health. About ten months ago a plank fell on his left side, and struck him in the interval between the last rib and the crest of the ileum. He suffered severe pain in the lumbar region immediately after the accident; and although he was enabled to return to his work in the course of a few weeks, the pain returned, and gradually increased, and

was accompanied with slight paralysis of motion of the arm and leg of the left side, with impairment of sensation. He was now admitted into one of the metropolitan hospitals, where he received considerable benefit from the treatment to which he was subjected. He was profusely salivated, and was twice cupped. In a short time the power of sensation to a great extent returned, and he became free from pain in his back. At the same time he recovered the power over his limbs to some extent. After this he was enabled to resume his work, but in nine days was again obliged to leave off in consequence of the recurrence of the pain. He was now placed under the care of my able and intelligent friend, Mr. Gallwey, surgeon in the Royal Artillery, who was then stationed at Woolwich. Mr. Gallwey established an issue in the side, and gave him iron and quinine, and cod-liver oil. Under this treatment he improved slightly, but not permanently. He was admitted into the hospital on the 14th of November, and at this time the pain had assumed to a remarkable degree a periodical character. It commenced at night when he went to bed, and lasted for three or four hours, subsiding gradually. On awaking in the morning he would feel a soreness in the region where the pain had existed the previous night. It was a relief to get out of bed, and assume the erect posture. But this, as all other movements of the trunk, was done with great care and caution. Any undue or sudden contraction of the muscles of the left side caused severe pain—pain somewhat of the same description as that which a man would suffer from any sudden contraction of the muscles when labouring under a fit of lumbago.

A careful examination of the spine discovered nothing wrong there; but decided pain was produced by pressure over the region of the left quadratus lumborum muscle, and the act of coughing or sneezing was extremely painful.

From the fact that the pain had its seat where the injury occurred, and also because it was excited by muscular exertion when the lumbar muscles on the left side were in action, it seemed to me clear that great part of the pain was due to mischief going on in the muscles and fasciæ of the left lumbar region—the result of the injury inflicted by the fall of the plank. Some of the muscular fibres had been injured, and perhaps also some of the nerves themselves had suffered. The periodical nature of the severe pain which occurred at night led me to regard that as neuralgic, the periodicity being, perhaps, determined by the small remnant of the marsh poison which remained in his system since the attack of ague: and Mr. Gallwey seems, judging by

his treatment, to have taken much the same view.

But there are other symptoms of the case which do not admit of so easy an explanation: the paralysis, namely, of sensation and of motion. The parts affected are the left upper and lower extremities. I read the following account from the case-book:—"The sensibility of the left arm is decidedly diminished, so that he cannot distinguish two points of a compass placed on it or the forearm an inch apart. He is unable to grasp firmly with, or completely to extend the fingers of the left hand. The sensibility of the leg is not so much diminished, but he is not able to bear much of his weight upon it, and he walks as if his legs were tied together. There was no tenderness of the spine, and he has full power over the sphincters."

Now the hemiplegic character of the paralytic affection would certainly indicate, *primâ facie*, that it had its origin in the brain. But this view is quite untenable, seeing that he is perfectly free from every other symptom of disease of that organ. It seems to me that we can only explain his symptoms by supposing an extension of some inflammatory condition from the lumbar nerves and muscles to the dura mater of the spinal cord. The chief difficulty in the way of adopting this view arises out of the extent of the paralysis, which involves the supposition of a corresponding extent of affection of dura mater; and it is difficult to conceive the existence of so extensive an affection of the dura mater with pain so completely limited to one spot. But if we consider the intimacy of the connection of the dura mater of the spine with the spinal nerves, we need not scruple much to admit that a slight affection of that membrane would impair the power of the nerves sufficiently to explain the existing degree of paralysis. Or it might be supposed that the injured nerves exercise some depressing influence on the region of the cord in which they are implanted, and this, by its reflection, may cause a similar state of depression of nerves higher up. On the whole, the more probable view seems to me to be, that the injury has created an inflammatory condition of the fibrous tissues external to the spine, and that this is extending to the meninges, and perhaps even to the bones.

At first we treated this man on the supposition that the pain was purely neuralgic, and he had large doses of carbonate of iron. After three days' trial of that plan, I resolved to deal with it as a case of inflammation of a fibrous tissue, and then gave him iodide of potassium in ten-grain doses thrice a day.

The results of this treatment were ex-

tremely interesting, and very deserving of your attention.

On the 20th of November, he began to take the large doses of the iodide. A very decided iodism made its appearance in a very short time. After the first dose he felt an uneasiness in his head, and after the third dose he began to feel as if he were tipsy; and a profuse discharge flowed from the nose, and the eyelids became œdematous, with a slight blush of redness; at the same time there was a flow of saliva as copious as if he had been freely salivated. In consequence of these symptoms he was not permitted to take a fourth dose of the medicine. During the latter part of the 21st and the 22nd, he took no medicine. On the 22nd there was evidently a considerable improvement as regards the pain; most of you will remember how distinctly the expression of his countenance indicated relief from pain. On the 23rd the iodism had completely subsided, and I now ordered the iodide of potassium to be resumed in the same doses as before. Immediately after taking the first dose on the second occasion, there was a return of the flow of saliva to the amount of half a pint; but on continuing the use of the medicine the ptyalism subsided, and a tolerance was established. Under this treatment he improved greatly—the severe periodical pain subsided—he is able to move about much better, and is regaining the power and sensibility of his limbs.

It is worth while to notice here a curious change in the characters of the urine, which occurred while he was under the influence of the first doses of iodine. On the 20th Nov. the urine was pale, and the sp. gr. 1006. On the 23rd, the quantity was much as before, that is, normal, but the sp. gr. had increased to 1030, and there was a copious deposit of lithic acid; and on the 25th, the sp. gr. was 1035; there was an abundant precipitate of lithate of ammonia, and there was evidence of the presence of bile in the urine from the play of colours caused by the addition of nitric acid.

I presume no one can doubt that, in this case, the peculiar group of symptoms which we call iodism, the diminished pain, the increased power in the limbs, and the remarkable changes in the urine, bore to the iodide of potassium as administered to him the relation of effect to cause. Doubtless the iodide has promoted elimination through the kidneys and the salivary glands of some material which at the least was maintaining a febrile state of his system. Can it be that the man was of a rheumatic or gouty diathesis, increased by a sedentary life since the accident, and that this kept up and increased the pain?

I fear that the favourable change will

not be permanent, and is only due to the temporary clearing out he has experienced from the iodide; and I am led to this opinion by the fact, that on a former occasion he experienced nearly as great improvement from the use of mercury, but speedily relapsed.*

Typhoid Fever.—In the case of a boy named Millward, æt. 17, also in Fisk Ward, you have had the opportunity of watching the course of the typhoid fever, which has been rather prevalent for the last two or three months. His illness began a fortnight before his admission, with headache, purging, bleeding from the nose, loss of appetite, and pain in the back and shoulders. On the day of his admission, the report says that he was extremely weak, his countenance pale and anxious, and his body was covered with maculæ. We have had no means of ascertaining the precise date of the appearance of these maculæ. You must observe the distinction between maculæ and petechiæ. The latter are dark red spots which are slightly elevated above the skin, and are actual extravasations of blood underneath the skin. They are, therefore, not affected by pressure of the finger. Maculæ, on the other hand, are generally of a rosy hue, which disappear or become much lighter upon pressure. These constitute a true eruption, like that of the exanthemata. They are prone to occur in those cases of fever in which diarrhœa or disease of Peyer's glands is present.

Time will not allow me to enter here upon the interesting discussion, latterly revived, as to the identity or non-identity of this fever and typhus, the one accompanied with more or less intestinal disease and diarrhœa, the latter generally quite devoid. I must content myself at present with a few remarks upon the treatment.

* The further history of this case was as follows:—The patient continued to improve up to the 11th of Dec., having taken the iodide (to which on the 29th Nov. five grains of citrate of iron were added), during the whole time. He then left the hospital, stating that he could walk better than ever he did since the accident. The day after he left the hospital the pain returned, and he became gradually worse, and was readmitted Jan. 1, 1851. The pain was now continuous; there was spinal tenderness over the last lumbar vertebra, the pain was much increased by turning in bed or stooping, he moved with extreme caution: a sudden jar or false step is exquisitely painful. The weakness of leg and arm had returned. He was told that his symptoms indicated disease of the vertebra, and that great quiet would be necessary, and that for a long time. He then proposed to leave the hospital, preferring to remain at home. He was discharged on the 10th Jan., and since then it has been ascertained through the kindness of Mr. Fogo, R.A., that he was discharged from the dockyard, having shewn unequivocal signs of caries of some of the lumbar vertebræ, with paralysis of the lower extremities.

One important feature of fever, whether it be typhus or typhoid, whether diarrhœa be present or not, is *depression*. The disease is adynamic, and great attention must therefore be paid to supplying the patient with a proper nutriment. The basis of his diet should be proteinaceous matters, in such a state that the stomach shall have little or nothing to do to bring them to a condition fit for absorption. In the animal broths, well made, and in milk, you have food which answers to this description. The former, on the whole, are probably the best. Milk is less easily digested, and does not always harmonize with other matters necessary to be given. Farinaceous matters may be introduced also in small quantities. A great secret of success in administering support to patients under these circumstances is this—to give it very frequently *in small quantities*, quantities so small that the whole or greater part of one supply may be absorbed before the next supply is brought; and also not to give a variety of food. Keep to milk and beef-tea, or other broth, or to broth or farinaceous matter.

In the great majority of cases you must, I think, give stimulants, and give them early. They often fail because begun too late. The best stimulants are brandy and port wine, with either of which chloric ether will go well as a medicinal stimulant; any one of the three will often suffice alone. Brandy and port wine ought not to be given together, simply because in general the stomach does not digest well two kinds of stimulants. The same rule as to frequent administration and in small quantities, which I have already laid down for food, holds with equal if not greater force in giving stimulants.

In my opinion, the question in the treatment of fever, is not whether you shall give stimulants, but how much you shall give. In many, you may go as far as half an ounce every half hour, or even an ounce of brandy with advantage; but this in bad cases. On this point you must be guided by the rapidity and compressibility of the pulse, and by the intensity of the heart's action. An important character of the pulse is found in the manner in which it strikes the finger; if *vaccillating*, it is a decided indication for the use of stimulants. The strength of the heart's action, especially of the second sound, is also a good indication. If either sound be weak, but especially the second, you need not fear to give stimulants freely. An impulsive character of heart's action with a feeble sound, also denotes the use of stimulants. Under such a plan of treatment, in which nutritious fluids and stimulants are given freely and from an

early period, we find our mortality in fever to be small; we very seldom lose a case of fever. I do not allow myself to be deterred from giving stimulants by the state of the bowels; I know many have a fear that much alcoholic stimulant irritates the bowels. If the alcohol be given in small quantities each time, it cannot irritate it by direct contact, because it is absorbed before it reaches the intestines. Alcoholic stimulants, if not given too much at a time, are digested in the stomach, and the alcohol gets immediately absorbed and carried into the circulation. If it does harm, it does so from being in the blood; yet, I confess, I have never seen satisfactory evidence of this.

We must also pay close attention to the bowels. If diarrhoea be present, it must be checked by those astringents which contain tannin; as the infusion or tincture of rhatany, of catechu, of matico, of logwood, or you may give enmcata with small quantities of laudanum. I find chalk often fails, and moreover it is liable to this objection, that as it does not dissolve, its particles may add to the irritation of the blood, by sticking in the ulcerated or inflamed patches. Counter-irritation over the abdomen by mustard, turpentine, or blister, is also frequently of great use. If there is hæmorrhage, you may give small doses of turpentine, five minims repeated every three or four hours, and in such cases turpentine must be used as an external counter-irritant to the belly.

Another feature in these cases is the frequent occurrence of bronchitis or bronchial congestion, indicated by rhonchus and crepitation. The bronchial congestion and diarrhoea are frequently the most difficult symptoms we have to deal with, in those cases in which we find maculæ. The bronchitis may be relieved by the free application of turpentine stupes, or blisters, to different parts of the chest at the same time or in succession; and though in such cases we must carefully watch the effects of our stimulants, we must not think of lowering our patient by bleeding, or by the administration of any antiphlogistic remedies.

Epilepsy.—The next case we come to is that of Haydon (vol. xxxii. p. 59), in Sutherland ward. This is a case of epilepsy, and, although the man has only had a few fits, they seem to have damaged the functions of his brain. The first fit occurred about twelve months ago, and the second four months afterwards, leaving his memory much impaired; about a fortnight ago he had a third fit, resembling the previous ones in character. I cannot dwell upon this case now: I merely call

your attention to it as a remarkable instance of how memory may be affected by even a few fits. The loss of memory in this, as in all other cases, is for events of recent occurrence. After his second fit he could not recollect whether he had taken his meals; nor when he set out on a journey to what place he was bound. The first fit left him paralysed on his left side for twenty-four hours (vol. xxxi. p. 140).

Lepra.—In Sutherland ward there is another case of lepra,—an Irish labourer (vol. xxxi. page 140). It is a good example of the highly scaly form of the eruption. In many places it exhibits the characters of psoriasis, and this was particularly marked on the backs of the hands, the skin in this situation exhibiting rhagades or deep fissures, and not presenting clearly any of the circular patches of lepra. Here, as you may often remark, the two diseases appear to run into each other, in some places exhibiting the separate circular patches characteristic of lepra, while in others a large irregularly-shaped surface of cuticle is covered with scales, and presents all the characters of psoriasis. This patient is getting well under very simple treatment. For some time he has been badly and insufficiently fed, so I considered that by putting him upon a generous diet, with occasional warm baths, and by the administration of mild purgatives, we should probably find that his condition would improve without the administration of other medicines; and it has so turned out. If you examine the patient at the present time, you will find that a great improvement has taken place. The skin on the back of the hands has quite recovered its healthy condition, and a great many of the patches on the body have entirely disappeared. The further treatment of this case will be *eliminative*. In a former lecture which I gave on this subject, you will recollect that I divided the treatment of these cutaneous affections into two kinds, the *antidotal* and *eliminative*. The latter kind of treatment is fulfilled by increasing the amount of the natural excretions: we may give frequent warm baths, and we may purge and sweat our patient, in addition to which diuretics may be given, in order to increase the action of the kidneys, so that we endeavour in every possible way to promote the elimination of the morbid matters from the system. This has already been followed out to a certain extent, but I now mean to give large doses of the acetate of potash.*

Hemiplegia.—The next case of interest who which we meet with is that of Russell,

* This patient left the Hospital quite well on the 11th of January, 1851, his general health being greatly mended.

is suffering from hemiplegia of the right side, with considerable rigidity of the muscles of the arm, and, in a less degree, of those of the leg, and complete loss of the power of speech. This case forms a remarkable contrast with a case of hemiplegia in Rose ward, where there is complete relaxation of the paralysed limbs. Rigidity of the muscles of paralysed limbs is indicative either of an irritative lesion, or of loss of substance at the seat of lesion. Complete relaxation seems due to a complete solution of continuity of the fibres of the brain without irritation.

When the rigidity is due to an irritative lesion, it affects the muscles early in the attack, or simultaneously with the paralysis. When it arises from loss of substance, and a slow cicatrization, it comes on late, and frequently follows a paralysis, in which there had been a complete relaxation of the muscles. This latter form is accompanied by wasting of the muscles—often extreme—but that from irritation exhibits little or no wasting. When the muscles are rigid from irritation, the direct galvanic current frequently excites more powerful contraction in the palsied than in the sound limb; the reverse is the case when the rigidity is due to loss of substance in the brain.

When rigidity comes on early, or simultaneously with the attack, antiphlogistic means are indicated, and are often beneficial. But rigidity which comes on late generally depends upon the occurrence of softening, followed by the rupture of vessels and the formation of a clot, which, becoming absorbed, leaves a chasm. The surrounding cerebral tissue then shrinks, and as it shrinks the rigidity increases. In such a state as this it cannot be expected that benefit will result from any kind of treatment. In this patient (Russell) both arm and leg are rigid, but there is greater rigidity of the former than of the latter. This is, as far as I know, always the case in both kinds of rigidity, probably because the arm is nearer the seat of irritation than the leg.

The irritation in this man is due, no doubt, primarily to meningeal disease, which has extended to the cerebral convolutions and hemisphere. The disease seems to have originated in syphilis. He at first complained of severe pain in the head, which became worse at night; he suffered from this more or less for three years, and was mercurialized for it. One night he appeared to have been seized with a severe epileptic fit, and was found in the morning speechless, insensible, and palsied on the right side; the muscles being firmly contracted, and the fist clenched.

Notwithstanding active antiphlogistic treatment at the time of the attack, he re-

mained unconscious for six weeks: passing his evacuations under him. His consciousness gradually returned, and he recognised his friends, but is unable to say anything beyond the monosyllable "No." I cannot doubt that in this case the meningeal inflammation has involved a large piece of the left hemisphere, and done it irreparable mischief. Since his admission, now three weeks ago, he has been freely mercurialized and iodized, and free counter-irritation has been used to the scalp, but there is no improvement whatever.

We next come to two cases of gout, upon which I gave a clinical lecture a short time ago.

Pyne is fast improving, and is now taking lemon juice, which acts as an agreeable diuretic. In Rose ward we first come to the case of paralysis with relaxation, which I have just alluded to: the case is worth carefully watching, as the man is gradually regaining power both of the arm and leg. In an opposite bed is a man of the name of Gardiner, who is expectorating large quantities of broken hydatid cysts. On a former occasion I referred to this as a case of chronic bronchitis with emphysema, the cause of the bronchitis being involved in great obscurity. I am not aware that anything could enable you to diagnose the existence of hydatids in the lung, but the presence of portions of them, or the presence of the claws of echinococci in the sputa. And, therefore, until we began to find them we were in the dark as to the cause of the bronchitis. But I shall not allude further to this case now, as I propose to make it the subject of another clinical lecture.*

FELLOWS OF THE ROYAL COLLEGE OF SURGEONS.

At a meeting of the council of this institution on the 11th inst., the following gentlemen were elected "fellows:"—Messrs. George Mayo, Australia; diploma of membership dated January 2, 1829. Samuel Osborn, Brixton, June 29, 1838. Thomas Herbert Barker, Bedford, May 16, 1842. Sherard Freeman Statham, Mortimer-street, April 28, 1848; and George May, Jun., Reading, Berkshire.

Gentlemen admitted Members on the 5th inst.:—Messrs. A. F. Bayne—W. T. Paliologus—J. F. Tierney—E. Casson—E. Mereer—T. Gibson—J. D. F. Cookson—J. Lees. On the 12th inst.:—Messrs. R. Reece—T. N. Dean—J. H. Sylvester—J. C. Crossing—H. B. Franklyn—W. W. Stabb—E. H. Evans—W. A. Byone—J. C. Savery—R. B. Carter.

* This series of Lectures will be continued in the united journals, the MEDICAL TIMES AND GAZETTE.—ED. MED. GAZETTE.

Original Communications.

ON NARCOTISM

BY THE

INHALATION OF VAPOURS.

BY JOHN SNOW, M.D.

[Continued from last volume, p. 627].

PART XVII.

Action of oxygen in respiration—Nature of asphyxia—Comparison between asphyxia and narcotism—Between narcotism and apoplexy—Cause of the symptoms in apoplexy—Diminished production of carbonic acid, and reduction of temperature under the influence of narcotics—Narcotic effects of cold—Colour of the blood under the influence of chloroform and ether—Irritability of the muscles after death—Effect of chloroform, &c. on this irritability, and on the rigor mortis—Modus operandi of chloroform, &c.

FOR a length of time after the changes which are effected in the air by respiration were discovered, it was generally believed that the carbonic acid was formed in the lungs, by the union of the oxygen of the air with carbon contained in the blood; and the phenomena of asphyxia were thought to be occasioned by the direct action of some form or combination of carbon which ought to have been excreted. Experiments by Edwards, and others, on the respiration of animals in hydrogen gas, and especially the beautiful experiments of Professor Magnus on the blood, clearly proved, however, what many physiologists had believed from the first,—that the oxygen of the air is absorbed (along with some nitrogen) and circulates with the arterial blood, combining with carbon in the systemic capillary circulation, and thus forming the carbonic acid which is exhaled from the blood in its passage through the lungs. Asphyxia is simply due to the want of oxygen in the arterial blood; for, although there is a little carbonic acid gas present in this blood during the more ordinary forms of asphyxia, yet the same symptoms occur to animals placed in hydrogen or nitrogen gas, although the carbonic acid gas in the blood is then exhaled. The presence of oxygen in the blood seems

absolutely necessary to the performance of the animal functions—so necessary that none of them can continue an instant without it. Animals live, it is true, for a short time after they are deprived of air, but a little consideration shows that they live only by virtue of the oxygen which is contained in their bodies, and that when this is consumed life no longer continues. The length of time which animals live after they are deprived of air is in the inverse ratio of the activity of their functions, and Dr. W. F. Edwards has shown* that animals of cold blood, as reptiles and fishes, die of asphyxia, nearly as quickly as animals of warm blood, when they are placed in water deprived of air, and of a temperature of about 100° Fah. The increase of heat quickens the changes taking place in the body, as the same author has proved by distinct experiments: the oxygen dissolved in the fluids of the animal is soon appropriated, and life is then extinct. Animals of cold blood can also be quickly killed at the ordinary temperature by the rapid absorption of agents, such as the vapour of ether, which have the undoubted power of arresting oxidation out of the body, and when present in the blood in sufficient quantity, have the effect of preventing the oxygen it contains from any longer entering into combination. The experiments of Dr. Kay† show that venous blood has some power of supporting the functions of the brain, and the irritability of the muscles when injected into the arteries, but this depends on some free oxygen it contains; for the analyses of Magnus have proved that arterial blood is only deprived of part of its oxygen by passing once through the systemic capillaries.

The relation between asphyxia and narcotism is this—that in asphyxia there is an absence of oxygen, whilst in narcotism the oxygen is present, but is prevented from acting by the influence of the narcotic. With this close affinity between asphyxia and narcotism, as regards their intimate nature, there is, as might be expected, a great similarity in the phenomena of the two conditions. The different parts of the nervous centres lose their power, under the influence of ether and chloroform, in the

* De l'Influence des Agens Physiques sur la Vie.

† The Physiology, Pathology, and Treatment of Asphyxia, p. 193.

same order as in asphyxia. The action of the heart continues in asphyxia after the muscles of respiration have ceased to contract, and this is the case under the effects of chloroform, alcohol, ether, and probably all narcotics, when they are absorbed in a gradual and uniform manner. For, as the muscular contractions of a peristaltic character, which are under the influence of the ganglionic system of nerves, can go on with a smaller amount of oxygen than those which are dependent on the cerebro-spinal system; so it requires a larger quantity of the narcotic to arrest them. During sudden asphyxia of robust subjects by privation of air, there are generally convulsions after the loss of consciousness, and there is likewise usually an amount of muscular rigidity and contraction approaching to convulsions when insensibility is quickly induced by chloroform or ether, in muscular persons or robust animals. By gradually inducing narcotism these contractions can be avoided, and in like manner, when asphyxia is slowly induced by vitiation of a limited supply of air, convulsions are not induced. The impediment offered to the absorption of oxygen in the lungs during bronchitis is sometimes accompanied by delirium not unlike that caused by a narcotic, and occasionally coma is met with. The state of the foetus in utero—just able to perform a few languid movements of its limbs—resembles very much the sleep caused by a narcotic. At this time it receives only a limited supply of oxygen at second hand through the placenta; but on being born, no sooner has it taken one or two free inspirations, than it exhibits an amount of activity and strength which would be fatal to the mother did it possess it whilst in the womb.

With all these points of resemblance between narcotism and asphyxia, it might perhaps be asked why a limitation of the supply of air, or in other words a partial asphyxia, might not be resorted to instead of a narcotic to prevent the pain of operations. The answer must probably be sought in the circumstance remarked by all the observers of the phenomena of asphyxia, that the blood becomes arrested at the pulmonary capillaries, when oxygen is no longer admitted into the air-cells of the lungs. On this account insensibility cannot be induced by means of

asphyxia, without causing congestion of the lungs, and great distress of the respiration.

In a profound state of narcotism the symptoms often exactly resemble those of apoplexy. In both conditions there is a partial suspension of the process of oxidation on which the functions of the brain depend; but this impediment to the natural process of oxidation arises from a different cause in the two cases. In narcotism it is due to the presence of the narcotic substance in the blood, which retards oxidation, as we shall presently see, by a kind of counter affinity for the oxygen: in apoplexy it depends on more or less complete interruption to the circulation of the blood. For the constant action between the oxygen of the arterial blood and the brain, there is obviously required a never-ceasing current of blood; and when this is interrupted in any part of the brain, it is clear that there must be an interference with the process of oxidation; and it matters not whether the circulation be interfered with by pressure arising from effusion, by the occlusion of one or more of the arteries which cuts off part of the supply, or by such an amount of congestion from any cause that the current of the circulation is interrupted. According to these views it ought not to signify whether there is increased or diminished pressure in the cranium, or whether the quantity of blood in the brain is more or less than natural; but if the circulation is interrupted or greatly impeded, there ought to be the symptoms which arise from impeded oxidation. Such indeed is the fact; we meet with the same symptoms in very different physical conditions of the contents of the cranium, and the question of bleeding and the application of other remedies cannot be decided by the cerebral symptoms alone, without the consideration of other particulars.

The circulation through the capillaries of the brain is undoubtedly sometimes retarded under the influence of narcotics; but this is the consequence and not the cause of the impeded functions of the brain. For, as was first pointed out by Professor Alison, the functions of the various organs of the body are accompanied by a force which aids the capillary circulation; and on the function of any organ being interrupted, the circulation through it is retarded, as is seen in the most striking manner in

the lungs during asphyxia. There is this further difference also between narcotism and apoplexy, that the narcotic acts directly on all parts of the body as well as on the brain, whilst in apoplexy the remainder of the nervous system and the other organs of the body are only effected in a secondary manner.

In my last communication,* several experiments were detailed which shew that the quantity of carbonic acid evolved from the lungs is considerably diminished under the influence of ether and chloroform. This circumstance indicates diminished oxidation, for carbonic acid is the chief product of that process in the animal frame, and it bears a pretty close relation to the amount of oxygen consumed. Dr. Prout formerly showed that the quantity of carbonic acid produced in respiration was diminished after drinking alcoholic liquors, and alcohol very much resembles ether and chloroform in chemical constitution and physiological effects. Under the influence of this agent, alcohol, Böcker ascertained, as was noticed before, that the amount of every one of the constituents of the urine is diminished, and phosphoric acid and urea are important products of oxidation.

In some experiments detailed in the first part of these papers,† the temperature of animals was seen to diminish under the continued influence of ether and chloroform. This circumstance is also illustrative of the diminished oxidation that is taking place, for the experiments of Dr. W. F. Edwards‡ on animals of various species, at different periods in their life, and in different seasons of the year, show that the consumption of oxygen in respiration always bears a direct proportion to the evolution of animal heat.§

* See last vol. p. 622.

† MEDICAL GAZETTE, vol. xli. p. 850.

‡ Op. cit.

§ The cooling of animals, in Sir B. Brodie's experiments, when the circulation was kept up by artificial respiration, after they were reduced to a state of suspended animation by narcotics, gives support to the above views, allowance being made for the artificial condition of the animals. The other experiments of this eminent physiologist, in which animals were found to cool rapidly under similar circumstances, after removal of the brain, are not at all opposed to the view that animal heat results from the process of respiration, if we reflect that respiration, or oxidation, is essential to all the animal functions, and that the formation of phosphoric acid and urea are probably as much accompanied by the evolution of caloric, as is the formation of carbonic acid.

Gradual exposure to a lower temperature, as happens in the change of season from summer to winter, alters the constitution of many animals, causing them to consume more oxygen, and thus to develop more heat, and bear up against a colder season; but other species, including some mammalia, as well as nearly all reptiles, are narcotised by the cold, and fall into a state of torpor in the winter, when the consumption of oxygen is reduced to a minimum. Cold air, or whatever abstracts the heat of the body, so as to make a considerable reduction in its temperature, is a true narcotic, and acts like other narcotics, by diminishing oxidation. Travellers in the arctic regions inform us that the symptoms produced by intense cold are sometimes not to be distinguished from intoxication by alcohol, except by the circumstance that no spirituous liquors can have been obtained. As regards its local effects, cold is probably the narcotic which has been longest known to the human species; for its benumbing effects (*ναρχῶω*, I benumb) make themselves felt, in the fingers at least, in most parts of the earth, at some season of the year. The local application of cold closely resembles that of chloroform and many other narcotics, in causing a slight amount of pain before sensibility is altogether abolished. Dr. James Arnott, who has given great attention to the local effects of graduated temperature in the treatment of various affections, has relieved neuralgic pains by the application of a mixture of salt and pounded ice, and has also rendered the surface of the body so insensible, that the introduction of setons, and other operations of a superficial nature, have been performed without pain. Dr. Arnott calls the process congelation; but the hardness which is produced in the part must depend on the solidification of the adipose substance; for if the water which enters into the composition of the tissues were frozen, their intimate structure would be destroyed, and a slough would be the result.

The effects of ether and chloroform on the appearance of the blood agree perfectly with the view above given of their *modus operandi*. There is generally no alteration in the complexion of the patient, or in the colour of the mixed venous and arterial blood as it

flows from a wound, so long as the inhalation is not pushed to the extent of embarrassing the respiration, and provided the patient is not holding his breath, on account of the pungency of the vapour, or a general state of rigidity which sometimes occurs for a minute or two; but when the blood which flows from the arteries and veins can be separately observed, whilst the patient is well under the influence of the narcotic, it is seen that the arterial blood is somewhat less florid, and the venous blood less dark than under ordinary circumstances. The lighter colour of the venous blood, which has been spoken of by Dr Gull, as well as by myself, points particularly to a diminution of oxidation in the systemic capillaries.

The phenomena attending the irritability which remains in the muscles for a longer or shorter time after death, and particularly the effect of narcotics on this irritability, accord exactly with the views above expressed. It can be shown, by the following amongst other reasons, that the muscular irritability depends on a little oxygen still remaining in the blood contained in the muscular tissue. Nysten* found that the injection of oxygen gas into the cavities of the heart increased the vigour and duration of the contractions. Sir B. Brodie states that, in dogs in which the circulation was kept up after death by artificial respiration, "there seemed to be actually an increased irritability of the voluntary muscles, continued not for a short time, but even for an hour and a half."† Nysten informs us‡ that the general result of his observations on the duration of the muscular irritability in animals of different classes, and of different orders of the same class, was in the inverse ratio of the muscular energy developed during life; and we previously saw, on the authority of Edwards, that this was just the ratio of duration of life under privation of air or asphyxia.

Chloroform, ether, alcohol, and probably all narcotics, have the power of suspending the muscular irritability. In a former paper of this series§ some experiments were related in which the irritability of the heart in frogs and

rabbits was removed by the vapour of chloroform; and in two of the experiments the irritability was alternately allowed to recover by letting the chloroform evaporate, and then suspended again by a fresh exposure to the vapour. In one of these experiments the peristaltic action of the small intestine of a rabbit was arrested by the local action of chloroform. I have frequently stopped the quivering motion of the intercostal muscles, which is seen on opening the chest of an animal immediately after death, by blowing a little vapour of chloroform on them through a tube. On one of these occasions Dr. Sibson was present.

The following experiments show the action of chloroform, &c., on all the muscles of the body:—

EXP. 80.—A half-grown guinea-pig was made to inhale chloroform in a glass jar till it ceased to breathe. The chest was then opened, and a tube armed with a stop-cock was introduced into the aorta and tied. The heart was still contracting, and the muscles were very sensible to the shocks of an electro-magnetic apparatus. Fifteen minims of chloroform, and two drachms of tepid water, which had been agitated together till the chloroform was suspended in minutes globules, were now injected. At the moment of injection the right anterior extremity and the two posterior extremities were stretched out, and the toes quivered. These limbs became quite rigid at the moment of the injection, as did also the neck and trunk of the animal. The left anterior extremity remained flexible. The wires of the battery were applied to the muscles of various parts of the body immediately after the injection, but no contractions could be excited, except in the left anterior extremity, and the muscles of the chest on the same side, which remained as irritable as before; the reason of this being that the injection had not entered the left subclavian artery. The heart ceased to act at the moment of the injection, and was afterwards quite insensible to the shocks of the battery.

EXP. 81.—A similar guinea-pig to the last was killed by the inhalation of ether, and was opened immediately after it ceased to breathe, whilst the heart was still acting. The tube was secured in the descending aorta, and two fluid drachms of sulphuric ether were injected. The posterior extremities were stretched

* *Recherches Physiologiques*, p. 335.

† *Physiological Researches*, 1851, p. 108.

‡ *Opus cit.* p. 355.

§ Vol. xlii. p. 415, 614.

out at the time of the injection, and there was a quivering motion of the toes. These extremities, together with the posterior half of the trunk, became instantly affected with post-mortem rigidity, and were totally insensible to the shocks of the electro-magnetic battery. The anterior extremities, and, indeed, all the anterior part of the body which had not been injected with ether, remained sensible to the shocks of the battery, and only became rigid between two and three hours after death. The heart ceased to act at the moment of the injection, some ether having been dropped on it from the syringe.

EXP. 82.—An ounce of rectified spirit of wine was injected into the aorta of a cat immediately after death from chloroform. There were muscular contractions at the moment of injection, but no contractions could be excited afterwards by mechanical irritation, although the muscles were very irritable just before, and were quivering when not touched. The heart, which was previously beating, also ceased to act. Post-mortem rigidity began to take place five minutes after the injection, and it still existed eight days afterwards.

EXP. 83.—A cat was killed by inhalation of chloroform, and three minutes after death three drachms of rectified spirit of wine, of 80 per cent., were mixed with three drachms of water, and injected into the descending aorta. The posterior extremities were stretched out at the moment of the injection, and almost immediately began to be rigid; and in less than ten minutes after the injection, the whole of the posterior half of the body was very rigid, whilst the anterior parts were quite flexible. An hour after death rigidity was commencing in the anterior extremities, and in half an hour more they and the neck were quite rigid. This cat was killed on Dec. 1st, 1850, and was kept in a room with a fire. The rigidity of the anterior half of the body began to subside at the end of a week, but that of the posterior extremities not till a fortnight had elapsed; and they were still quite fresh, although putrefaction was commencing in the chest and neck.

As absorption of vapour continues in the frog by its skin after the respiratory movements have ceased, it is not necessary to resort either to dissection or injection in them, as in mammalia, in order to cause the extinction of irritability, and bring on the post-mortem

rigidity. It can be induced in a very few minutes by exposure to the vapour of ether or chloroform, although, under ordinary circumstances, the muscles remain long irritable and flexible in these animals. In some interesting experiments lately detailed in the *MEDICAL GAZETTE* by Mr. W. F. Barlow,* that gentleman produced rigidity in a single limb of living frogs without much affecting the rest of the animal; he also observed what I had previously remarked,† that the setting in of rigidity in these animals is sometimes accompanied by a movement of the body.

The state which is called post-mortem rigidity appears to be the natural condition of muscle when no kind of change in its composition is taking place. As long as the feeble oxidation continues, which enables it to be irritable after death, it remains flaccid; but when this ceases, from want of oxygen, from reduction of temperature, from the counter affinity of a narcotic, or from exhaustion of the nutrient materials, the muscle becomes rigid, and remains so till a new kind of oxidation—that of putrefaction—commences, when it again becomes flaccid. Although the muscles, when affected with this kind of rigidity, are in a state of completely suspended animation, they are not always incapable of again living; for M. Brown-Sequard has restored the irritability of the muscles of a dead guinea pig after they had been rigid from ten to twenty minutes, by making the blood of a living animal of the same species circulate in its vessels. Although reducing the temperature hastens rigidity, it is not essential to it; for I have seen a foetus at the full term born in a state of complete rigor mortis.

In a former paper‡ several proofs were given that chloroform and ether do not prevent oxidation in the system by themselves combining with the oxygen of the blood. Among these proofs were some experiments showing that the chloroform and ether are exhaled again unchanged from the blood as it circulates through the lungs. The paper of next week will contain an inquiry into the manner in which these narcotics act in limiting and preventing oxidation in the living frame.

[To be continued.]

* Page 713.

† *MED. GAZ.*, vol. xlii. p. 415.

‡ Vol. xlv. p. 626.

CASE SHOWING A
SOURCE OF FALLACY
IN THE
MICROSCOPIC EXAMINATION OF
URINE.

BY THOMAS INMAN, M.D.
Liverpool.

THE following case is interesting as indicating a source of fallacy in the microscopic examination of urine containing lithate of ammonia.

E. B., æt. 3 years, was brought to the Institution for the Diseases of Children, with all the symptoms of scarlatinal dropsy: having no other mark of the fever, I examined the urine with great interest, expecting to find some evidence of inflammation of the kidney. The examination, however, threw no light on the case. The urine was scanty, dark-coloured, depositing crystals of lithate acid freely; there was no excess of urea; no albumen, blood, or pus, or any casts of tubes.

It is unnecessary to detail the treatment, as the child ceased attending after the second visit.

A second specimen of urine was brought in a few days, and was kept unavoidably for ten days before it was examined.

I found it at the end of that time perfectly fresh in odour, as if it were not a day old; dark in colour as before, and depositing a very copious brown precipitate; free from albumen; having no excess of urea; no perceptible bilious matter; no pus or blood.

The urine was examined chemically and microscopically.

Liquor potassæ cleared the fluid of the deposit to a material degree, but there was still a precipitate left of a light-fawn colour, with a few minute crystals of phosphates.

Heat also cleared the fluid partially, leaving a light precipitate, over which it had no influence.

Nitric acid added to the dried precipitate, and heated, produced with ammonia abundant evidence of the presence of lithates.

On the addition of more dilute acid, effervescence was produced, and after a time a copious formation of lithic acid crystals.

There could be little doubt of the

abundant existence of lithate of ammonia.

If we refer to the authorities, we shall find that this salt is met with in two forms microscopically: one as a granular amorphous sediment; the other as in comparatively large granules.

In the specimen before us, the microscope could only detect the latter. The granules were larger than blood-globules about $\frac{1}{2500}$ inch diameter, all of the same size; dark-brown in colour, and occasionally massed together. My suspicions as to their character were raised, however, by finding a great number of confervoid spores present in addition to these granules, and I determined to test the nature of the large ones.

I first applied heat to a specimen under the microscope. I immediately found that the brown colour of the large granules had disappeared, and that in their place were simple greenish-yellow spores. *As the fluid cooled, most of these spores regained their brown tint.* While warm, I added to one specimen a drop of tincture of iodine, when every granule or spore, with very rare exceptions, became blue, showing *its starchy or vegetable nature.*

Tincture of iodine had little influence over the brown granule prior to the application of heat—i. e. before the lithatic coating was dissolved away. The precipitate left by heat and liq. potassæ was then examined, and found to consist entirely of spores, having a light-green colour by transmitted light.

The conclusion to be drawn from this examination is, that a number of spores existed in the urine, which either had the power of incorporating the lithates with themselves, or which served as nuclei for their deposit equably on their walls.

We must also learn to doubt the truth of the assertion that the lithates appear in the form of large brown granules, as well as minute and almost molecular particles. (This is the first time I have met with the large granule in a large experience.) If the experience of others confirm my own, of the rarity of the larger globules and their intimate connection with vegetable structure, it will then become an interesting question—Whence come these spores? How are they related to lithatic urine?

I am, sir,

Your obedient servant,

THOMAS INMAN, M.D.

Liverpool, November 7th, 1851.

REMARKS ON THE
FIBRINOUS ELEMENT OF THE
BLOOD IN RELATION TO
DISEASE.

BY BENJAMIN W. RICHARDSON,
Lic. Fac. Phys. and Surg. Glas.

(Read before the Medical Society of London,
November 15th, 1851.)

[Concluded from page 1012.]

Change in the characters of fibrine.—I have not time to dwell on all the changes of character which fibrine may undergo during life. Passing, therefore, those cases in which it has exhibited signs of putridity and of softening, and which have been so well described by Andral, Babington, Gulliver, and many other authors, I shall proceed at once to consider it as undergoing *coagulation* in the vessels of the living body. The doctrine that the fibrine of the blood may, during life, separate from the other constituents, and assume the solid form, though objected to by some writers, is, I think, capable of being fully established.* The circumstances which lead to such a state being:—1st, super-fibrination of the blood; 2d, reduction of the ordinary diluents of the fibrine; and 3dly, slowness of motion in the vessels.

Dr. Burrows, in his admirable Croonian Lectures† on the Pathology of the Blood, discusses this subject at great length, and points out particularly cases of fibrinous coagulation in the blood-vessels during life, arising from retardation in vascular motion. He narrates one case which was under the care of Dr. Bright. A weak, emaciated, waxy-looking girl, was suffering from palpitations of the heart. These were followed by œdema of the legs, great pain in them, and extreme enlargement of the superficial veins. In this state she died; the œdema gradually going off, and becoming succeeded by wasting. After death a mass of yellow laminated coagula was found to fill the inferior vena cava and the iliac veins; thus

fully accounting for the impeded circulation.* Dr. Burrows also relates the particulars of another case, in which gangrene followed a somewhat similar cause; but I prefer to substitute for it a case of my own, which is, I believe, of the same kind.

The patient to whom I allude is a tall, emaciated, pale woman. She first became ill in 1848, complaining chiefly of lowness of spirits, with fits of excitement, and palpitations at the heart. One evening, on getting into bed, she felt a sensation of great heat in the feet, with pain, and, on looking at them, she saw that they were swollen. She now underwent some treatment, she cannot explain what, and soon recovered. After this she suffered from numbness in the feet, and sometimes in the hands, and in 1850 she became much worse. I saw her first on the 28th of February, 1851, and found her in a most painful and deplorable state. An enfeebled heart was acting with a rapidity rarely seen; the feet were dark and swollen, and the tips of all the toes were gangrenous. The superficial veins were very much enlarged, and she complained of intense pain. The heat of the rest of the body was low, and all the secretions were then natural. On examining into the cause of this gangrenous state, my attention was naturally enough turned to the heart, as having most to do with the matter. But in what state could that organ be to cause such results? Was there a constricted aortic orifice from induration of the valves? Of this there was no sign. Were there warty excrescences on the valves, and were minute portions of these being carried round the circulation, thus arresting the currents of blood in the extreme parts of the circulation; or, lastly, was there a fibrous concretion in the heart undergoing the same process, as I have once seen? I must confess that at first I inclined to the latter supposition; and, without anticipating more than temporary relief, I

* The belief that fibrine during life may undergo coagulation from arrest of circulation in the blood, seems quite in accordance with the views of Lehman.—Physiological Chemistry, vol. i. p. 349.

† MED. GAZ. Aug. 15, 1835.

* The coagulation of blood in the body from languid circulation was quite well known to the old writers. Thus Dr. Browne, the writer of a book entitled "Institutions in Physic," published in 1714, in a chapter devoted to Symptomatological Pathology (page 238), in speaking of the reception and expulsion of blood from the heart, remarks:—"But being much slower, and the expulsion still more languid, then follows a weakness, or decay of strength, *polypous concretions*, cold, *leucophlegmatic dropsies*, and several other diseases proceeding from hence."

prescribed mercury combined with morphia. To my surprise, as the woman came under the influence of mercury, the symptoms passed off, the sloughs disappeared, nourishing diet was well borne, and she became enabled to resume her ordinary occupations; coldness of the feet only remaining.

After some three or four months of respite, this woman again suffered from the same symptoms; and, on this occasion, they seemed plainly to have been brought on by an attack of diarrhoea, which had much reduced her. The right hand was now also affected. I employed on this occasion a liberal use of saline medicines only, with light nutritious diet, and she recovered. Since then I have seen her suffering from two other similar attacks, and I have therefore been enabled to watch the matter closely. The chief causes of these attacks are anything that lowers the body, and robs the blood of its fluid parts, especially profuse purging. Rest also has a great effect in bringing on the attacks; and she can sometimes ward them off altogether by taking a sharp walk when feeling premonitory symptoms. I have never seen the gangrene proceed very far; and it always passes off dry, leaving beneath a delicate epithelium. During the attacks the superficial veins are always enlarged, and, about the flexures of the joints, distinct, moveable, little pultaceous bodies, about the size of a pea, may be distinctly felt, and pushed on in the course of the venous current.

On examining the heart, I find no trace of any organic disease; and in this opinion I am happy to be strengthened by the opinions of my excellent friends, Drs. Arnott, Willis, and Crisp; all of whom have seen and carefully examined the case with me.

Reverting, then, I set this case down as one of the same kind as those described by Dr. Burrows, only in a less severe form. I believe that the gangrene is the result of a soft coagulation of the fibrinous portion of the blood in the extreme venous trunks, produced by enfeebled power of the heart, and especially so when this is attended with a diminution in the fluid constituents of the blood. Three things lead me to form this opinion:—

1st. The appearance of the gangrene after any cause which gives rise to an

enfeebled state of the heart, or robs the blood of fluidity.

2d. The enlargement of the veins, and the existence in them of the soft masses to which I before alluded.

3d. The very good results which invariably follow the effects of mercury, saline medicines, and mild nutritious food,* and especially the prophylactic power of active exercise.

The formation of *solid* masses of fibrine in the heart and bloodvessels during life is another subject of extreme interest, and has at various times excited violent discussion. Of the existence of such depositions during life I am thoroughly convinced, and I am inclined to the opinion that they are of far greater importance than some pathologists of this day are given to admit. In another place† I have not only shown that, when the blood is surcharged with fibrine, these deposits may be left upon the valves, but that, in the event of a valve being indurated, there may be left upon it suddenly a deposit of fibrine of sufficient quantity to bring on instant death by syncope; and I have detailed a case from the essay of Dr. Crisp, in which a poor woman, on exerting herself after her confinement, died suddenly, as I opine, from a rapid deposit of fibrine on an indurated aortic valve, by which the grand exit for the arterial blood was closed, and the circulation was at once completely arrested.‡

I might here greatly enlarge on the question, whether that peculiar state of the valves, which occurs by virtue of some

* This conclusion is quite in accordance with the experiments of Zimmerman, which show that the amount of fibrine in the extreme venous trunks is greater than in those near to the heart. It is also in most perfect accordance with the opinions of Bouchet, expressed in his paper "On the Spontaneous Coagulation of Blood in the Veins in Cachectic Diseases." See Dr. Ranking's Retrospective Address, Prov. Med. and Surg. Trans., 1846.

† MEDICAL GAZETTE, August 8th, 1850, "On the Different Ways in which Death Occurs."

‡ Diseases of Blood-vessels, p. 88. The experiments that have been made by Magendie, and which show that foreign substances, on being introduced into arteries and veins, become loaded with a fibrinous concretion, are remarkably corroborative of the position I have here taken.

See some remarks on this subject also in Carswell's Pathological Anatomy, Fasciculus 11th, Analogous Tissues; and in the very excellent Lectures on Pathology lately published by Mr. Simon, of St. Thomas's Hospital—Lancet, 1850.

Vogel and Wagner also believe in the direct deposition of fibrine from agitation against the valves of the heart.—Willis, Wagner's Physiology, p. 267.

change of fibrine during rheumatic fever, is caused by inflammation of the lining membrane of the heart, or by direct deposit. On this matter I shall only remark that, while I am fully convinced that fibrine may be directly deposited, and while I also admit that the internal lining membrane of the heart seems from its structure not to favour the exudation-theory, I must allow that, in this particular case, there does appear to be something more at work than simple deposit. Otherwise, I see no reason why similar valvular depositions should not occur in other cases where the blood is super-fibrinised, as in pleurisy, pregnancy, phthisis, pneumonia, and the like—diseases in which such results never happen, as far as I am aware.

The tendency to coagulation of fibrine during life has, it would seem from the old writers, sometimes occurred in a very striking form. Thus I find, in the *Edinburgh Annals of Medicine* for the year 1800, an account by the famous Dr. Chisholm of what he calls an epidemic polypus, occurring in Granada in 1790. He records that forty negroes, after being exposed to excessive heat, were seized with peculiar symptoms, the most important being vehement palpitations of the heart; the audibleness of which, he adds, was so great that the owner of the slaves could hear the palpitations in an adjoining room. Seven of these negroes died. In the first two cases the heart was not opened; but, as every other organ appeared healthy, the heart was inspected in the third case, and revealed what appeared to Dr. Chisholm to be the cause of the whole mischief. In the right ventricle there was found a polypus of great extent, two inches in breadth; while, in the fourth body, there were large, firm, polypous concretions in both ventricles, and in the right auricle. In the 5th, 6th, and 7th cases, were the same appearances. "After finding these signs (the Doctor adds) I changed my plan of treatment. On first detecting symptoms of the epidemic, blood was drawn, and afterwards the patient was freely salivated with mercury. The results were most happy—not one that was salivated died."

I wish I could go further into these cases, the symptoms are so interesting,

especially in illustrating the influence of mercury on the fibrinous element of the blood. An account of another similar epidemic is also related by Dr. Huxham, in the *Philosophical Transactions*. This happened amongst some sailors. Palpitations here also were very prominent, and twenty died. On opening the hearts of two of them, monstrous polypi were found on both sides, weighing in one or two cases an ounce.* I do not dwell on these cases.

Amongst the old physicians, the existence of fibrinous concretions in the heart, in what may be called a *chronic* form, was likewise fully known, as well as the effects with which they are likely to produce. Thus I find one Dr. Wm. Gould† writing in 1684, describing these concretions and their effects with an accuracy as surprising as it is valuable. Remarkable, indeed, it is to find this simple observer, a man ignorant of course of all that pertains to a knowledge of the chemistry of the blood, naming those diseases as most apt to give rise to polypous concretions, which modern science has demonstrated to be very abnormally rich in the fibrinous element, and which modern pathology has proved to be commonly followed by fibrinous coagula. Pneumonia, pleurisy, and phthisis pulmonalis, enter particularly into this writer's category.‡

The effects of such concretions in inducing sudden death were also particularly noted by this writer, and by many others. Queye, the writer of a Latin essay on Syncope and its causes, published in Haller's Collection, names polypi of the heart as one common

* *Philosophical Transactions*, 1740.

† *Philosophical Transactions*, 1684. The question relative to the cadaveric or anti-cadaveric origin of these concretions was one of great importance with the old writers. Thus, Dr. Gould, the author above noted, attacks the opinions of Kirckringius on this subject in the paper referred to, he himself being a firm believer in their existence during life. On this matter see also a letter by Pasta, published in 1737, entitled *Epistola de Cordis Polypo*, in *Dubium Revocato*.

‡ Burserius attributes to pneumonia the power of producing polypous concretions in the heart, and in this opinion he is followed by Grisolle, who in his *Treatise on Pneumonia* states, that in one-fifth of the cases inspected by him he found dense concretions intertwined among the columnæ carneæ. Burserius, *Institutionum Medicinæ Practicæ*, vol. iv. chap. x. p. 233; Grisolle, *Traité Pratique de la Pneumonia*, p. 70-76; see also Bouilland, *Traité Clinique des Maladies du Cœur*, tome ii. p. 710-726.

cause of death by syncope,* and I find Cullen,† and many others, making the same allusion. A very interesting symptomatic fact with reference to these concretions is, that no symptom has attracted so much attention during their existence in the heart, as the violent palpitations which they seem to induce; and it is still more curious that a late author at the Royal Med. Chir. Society, in describing a case of the kind occurring in a patient of his own, speaks of violent palpitations of the heart as forming the chief peculiarities of the case.‡

Did the occasion permit, I could lay before you many cases illustrative of the effects of these concretions in producing sudden death, and proving that we might not be far from right in falling back in this matter, on some of the observations of the old school. The subject, however, has not been entirely neglected in the present day. Dr. Hughes has produced an elaborate paper on the subject, in which he has divided these concretions into different varieties, and has given a table containing a great many cases, with intent to show that such concretions are more commonly found on the arterial, than on the venous side of the system. I have looked over this table, I may add, and in addition have taken the pains to collect evidence on the subject from many more cases, and the result is, that I can second Dr. Hughes' supposition, though at the same time I may remark, that the difference is not very striking.

Dr. Hughes also affords further distinctive marks of cadaveric and anti-cadaveric polypi, and speaking of the effects of these concretions in the living heart, he supplies cases of sudden death from their presence.§

In a paper read before the Medico-

Chirurgical Society, Dr. Barclay has also briefly alluded to this subject; and from the observation of 79 cases in which the heart was examined, he is led to conclude that fibrinous concretions are most common in the young.* With this opinion I fully concur, and I think it accords admirably with the fact pointed out by Wagner, and other physiologists, that the fibrinous element exists in all animals in greater proportions during the first periods of life.

Lastly, it occurs to me that in some cases of death by asthenia, where these fibrinous concretions are found filling entirely the outlets and the cavities of the heart with an extension even into the bloodvessels, the very cessation of the act of life may be owing to their presence, the central organ of the circulation becoming literally choked by them.

In a case which I had an opportunity of inspecting in the month of August last, I was particularly struck with this occurrence:—A gentleman, who had been accustomed to business habits, was suddenly seized, while preparing for a continental tour, with considerable paralysis on the right side of the body. At the same time the lungs showed signs of tubercular deposit. He was kept quiet, and lived on for three months, being carefully supported throughout with good food, which he always took with appetite, and seemed to digest easily. He sank, however, and died by a gradual failure of the circulation. At the autopsy, the corpus striatum of the left side was found a little softened, and the lungs were filled with miliary tubercles; the heart was soft, and the aortic orifice and the ascending part of the aorta were completely filled with a round, dense fibrinous cord, which had evidently been for some time in process of formation. The same thing was also found in the pulmonary artery, but the concretion was not quite so large and firm.

A case differing somewhat from this in primary symptoms, but ending by asthenia in a similar manner, is recorded by Dr. Corrigan in the Dublin Hospital Gazette.† A man was admitted into the Richmond Hospital

* Queye de Syncope et causis eam producen-
tibus, Hall. Disp. Anat. vol. vii., Gottingen,
1735.

† Cullen's First Lines of Practice of Physic,
edited by Gregory. Edin. 1829, vol. ii., Art.
Syncope, p. 38.

‡ Dr. Fletcher, of Birmingham.

§ Guy's Hospital Reports, vol. ii., p. 147. The
subject has also been ably discussed by M. F.
Fredault, in an Essay on Polypiform Concretions.
He looks upon these clots as pseudo-membra-
ous transformations deposited from the plasma
of the blood during life, and believes fully in the
coagulation of blood in the body.—Archives
Générales de Médecine, July, 1847.

* Med. Chir. Trans., vol. xxxii., p. 135. Dr.
Barclay does not, however, altogether incline to
the theory of the direct depositions of fibrine.

† Vol. ii., Dec. 15th, 1845.

supposed to be suffering from fever. "The case," says Dr. Corrigan, "presented no appearance of head symptoms. There was no affection of the abdominal viscera. The lungs presented no signs of engorgement except in the last day of life. There was no complaint of pain; the patient was merely feeble, lay on his back, with a cool skin, and a very feeble and daily sinking pulse. The patient was then dying of the failure merely of one function—that of the circulation." At the inspection, the lungs were healthy and the tissue of the heart soft. On slitting open the left ventricle it was found to contain grumous dark-coloured blood. In the right ventricle, pulmonary artery and branches, a singular appearance was presented: a bulbous-shaped polypus lay in the right ventricle not sufficient to fill it. The polypus passed also into the pulmonary artery, and continued its ramifications along the arterial branches." Dr. Corrigan, after giving reasons to show that this concretion was not formed in the dying moments of the patient, but was of previous formation, next traces its effects, and speaks of it as having been "either the cause or the consequence of the sinking powers of the circulation." "But whether the cause or the consequence," he adds, "it is plain that once formed, even in small extent, it would prove a serious hindrance to the circulation, and would most probably, even necessarily, cause death by its constantly increasing size and proportionately increasing obstruction to the function of the lungs and to the circulation." * * * This case, I presume, adds powerful testimony to the correctness of the views which I have proposed above.

I have thus, sir, given a rapid sketch of portions of a very important subject. I have shown how I conceive the fibrinous element of the blood may be increased in certain diseases; I have dwelt on the manner of its decrease in other diseases. I have ventured to criticise our present habit of calling two dissimilar diseases by the one name, of fever. I have spoken of some changes of form which fibrine may undergo during life, and I have traced the effects of such changes as regards life.

As I said at first, the subject is too long and too important to have any justice done to it in one paper, and al-

though I have kept as much as possible to general views and inductions, yet I still feel that even with reference to the matter now brought forward, many things have been omitted which might very properly be made subject of discussion in this place. At the same time I cannot forbear to express a hope, that my paper, as it stands, may not prove altogether devoid of interest. In its construction I have earnestly endeavoured to combine pathological and practical observation with physiological fact, and herefrom only to draw conclusion. That the attempt has been a rude one I am quite aware, but it occurs to me that this mode of procedure, however imperfect, is in the right direction, and that by eliciting the knowledge and criticism of others, it cannot fail, in the end, to be in some way serviceable. At all events it is far superior to the system of mere empirical medical observation and argument; a system which not only robs its advocates of much real pleasure, but forms the groundwork of every absurd medical schism, and mightily impedes the onward and truthful progress of a grand and useful science.

CASE OF SPONTANEOUS RUPTURE OF THE LEFT AURICLE OF THE HEART.

BY FRANCIS BATTERSBY, M.B.

Dublin.

LAST summer, when attending the patients of my friend, Mr. Maul, of Southampton, during his temporary absence, it occurred to me to meet with the following singular case:—

The subject of it was a respectable man-servant to a gentleman of fortune. He was aged 58 years, of middle size, spare habit, pallid complexion, and taciturn. On Thursday, June 26th, he walked into Mr. Maul's surgery, complaining of uneasiness in the left side of his chest, which he attributed to having, as he said, "displaced his heart" a fortnight before when carrying a heavy box up stairs. He did not complain of having cough, nor of anything else, neither did he mention that his legs were swelled, nor that he had had some spitting of blood; to both of which, I have been since informed, he

might then have confessed. His pulse was quiet and regular; his bowels were confined.—℞ Pil. Galb. Comp. ʒss.; Colocynth. c. ʒj. M. ft. pil. x. duas sumat omni nocte. ℞ Ammon. Carb. ʒss.; Spt. Lavend. c.; Tinct. Carb. c.; Aurantii aa. ʒiv.; Mist. Camphoræ, ʒx. M. sumat cyath. vinos bis in die.

I thought nothing more of him until I was called to see him between 4 and 5 o'clock of the morning of Sunday, June 29th. I found him sitting in the hall of his master's house, the door being open; he was bent forwards, gasping for breath; respiration was not hurried; he was quite sensible, and spoke feebly and in catches. The pulse was exceedingly rapid, irregular, and weak; heart's action strong and tumultuous, with a dulness on percussion greatly extended. Mucous râles at back of chest. His countenance was dark-coloured. Feet and hands cold.

On inquiry, I found he had not laid down, having been spitting blood since 10 o'clock the evening before. Some of the sputa remaining in a vessel appeared composed of mucus and of venous blood. I cannot state the quantity of blood expectorated, as the previous sputa had been thrown out; but he told me he had thrown up much blood.—Empl. Lyttæ inter scapulas per horas sex. ℞ Spt. Ammon. arom. ʒj.; Ætheris Sulph. Comp. ʒij; Tinct. Hyoscyami, ʒss.; Mist. Camphoræ, ʒviiss. M. Coch. ampl. unum omni horâ sumat.

At 4 o'clock p.m. I saw him, in consultation with Mr. Stace, surgeon, of Southampton. His pulse was then more regular, and not so rapid; but he had the same dyspnœa, and he could not lie down in bed. His legs were much swollen. Mr. Stace replaced the blister on his back, and ordered—℞ Spt. Æther. Sulph. c. ʒij; Tinct. Hyosc. ʒij; Mist. Camphoræ, ʒvss. M. Sumat Coch. unum ampl. omni horâ. catapl. spineus cruris.

Monday.—Slept none or little, and has not lain down. Respiration not rapid. Pulse regular, 94. Feet cold. Since yesterday has spat but very little blood. He appears collapsing. Face dusky. Bowels confined.—Hab. haust. Olei Ricini. ℞ Spt. Æther. Sulph. c.; Tinct. Hyosc. aa. ʒj.; Spt. Æther. Nitrosi, ʒij; Mist. Camphoræ, ʒvss. M. Sumat cochl. unum ampl. 2dâ. qq. horâ.

Tuesday, July 1st.—He died comatose at 2 o'clock this morning. Mr. Stace very kindly assisted at the post-mortem examination, which I made in about sixteen hours.

The rigidity of the body was very great.

On raising the sternum, the pericardium was seen enormously and tightly distended, and was filled by, as closely as I can guess, nearly a quart of clotted blood. At first there was some difficulty in discovering whence it had come, until, having turned up the apex of the heart, the back part of the left auricle was found blackened from extravasation; and, on searching more accurately, a small ragged opening, capable of admitting a goose-quill, was discovered just below the auricular appendix, leading into the cavity of the left auricle. In its interior was seen a large rent of its muscular fibres, some of which, however, remained intact, descending from the opening obliquely and to the right side. The entire length of the rent was close on three inches. No lymph, nor any appearance of inflammation, was traceable, either on the inside or outside the auricle, which seemed healthy, and was not thinned; but the left ventricle appeared thicker than natural. Both these cavities contained clotted blood.

There was no appearance of aneurism of the heart, nor of any of the large vessels, which last were quite natural. There was some calcareous material at the convexity of one of the semilunar valves of the aorta: their free edges, as well as all the valves of the heart, were perfectly normal.

The lungs were congested. In the left pleura were six or eight ounces of clear fluid, without a trace of inflammation of the membrane.

The heart contained no more fat than usual, and it was not softened. The liver and kidneys were healthy.

Spontaneous rupture of the left auricle of the heart, without any appreciable textural change of this, is of very rare occurrence.

The rupture in this case was obviously due to the laborious physical exertion of carrying a heavy box up stairs more than a fortnight before death; but, from the appearance of the heart, it would seem that the opening in the auricle, preceded by the giving

way of its internal fibres, did not take place until the Saturday before death; and the smallness of this opening may have been the cause of life being prolonged for the unprecedented period of more than 50 hours.

It is not surprising that, after having seen him the second time, I considered that he was affected with aneurism, which, having burst, had given rise to the hæmoptysis. This, so far as I am aware, is a symptom before unobserved in cases of rupture of the heart; and it arose entirely from a stasis of the blood in the lungs, owing to its interrupted progress through the heart.

The fluid in the pleura was most probably cadaveric.

The treatment of this case, in which Mr. Stace and I entirely coincided, was anything but satisfactory, and bears out Dr. Copland's observation, that "in most instances medical interference will be quite unavailing, and even as much mischief as benefit may result from it."

Should you consider the few notes of this case I have been able to give you, of sufficient interest to science, you will oblige me by giving them a place in your very valuable journal

Dublin, 31, Kildare Street,
November 1st, 1851.

HINDU REMEDY FOR STERILITY.

THE following is copied, merely as a matter of curiosity, from one of the medical works received from India, a short time since, and already alluded to in this Journal. Take powder of bidari or anuloka, mixed with honey or ghee, and eat the testes of a goat, roasted and prepared with salt, ghee, and long pepper. The preparations of maskulaj, with sugar, barley, and wheat. Eat the eggs of erabs, crocodiles, or turtles, properly prepared. Flour prepared with ghee and milk, rubbed on the feet with oil mixed with crocodile's eggs, the flesh of rats, frogs, and the eggs of sparrows. The patient, in the meanwhile, is to drink fresh milk with sugar, honey, and swallow the powder of Swayangupta, with ekuruka!—*Boston Medical Journal*.

MEDICAL GAZETTE.

FRIDAY, DECEMBER 19, 1851.

It is a curious fact, as showing the instability of all medical doctrines, and the uncertainty attendant on all discoveries which are actually beneficial to mankind, that in the present day an attempt is being made to replace VACCINATION by VARIOLOUS INOCULATION as a means of protection against the fatality of SMALL-POX. It might, indeed, have justly been considered that the investigations upon which the Vaccination Act of 1840 was based had already determined the superiority of Vaccination, and had fully justified the penal clause of that Act, which prohibited the practice of inoculation under pain of imprisonment.

Notwithstanding the care and precautions bestowed upon that investigation, and the soundness of the conclusions then arrived at, exertions are now made to throw discredit upon both the facts and inferences by which the legislature was then wisely guided. With regret and alarm, we observe a disposition evinced by some members of the medical profession to disparage the advantages of Vaccination, and to recommend Variolous Inoculation, upon grounds which appear to us to be wholly insufficient. We deeply deplore that such views should be held and fostered by individuals whose position and attainments have, on other subjects, justly gained for them great influence, and even upon the question now under consideration have constituted them authorities.

Thus, Dr. Copland, whose admirable "Dictionary of Practical Medicine" will probably be the *practical* guide of numbers of the rising generation of medical practitioners, tells us that,—

“Half a century has brought us to the position that we are *doubtful* which to prefer,—Vaccination with its present benefits and its future contingent dangers, or Inoculation with its possible present dangers, and its future advantages.” Our own observations have left us in no such doubt, either upon the *certain* present dangers of Inoculation, or of the positive advantages of Vaccination. We do not for one instant anticipate, with Dr. Copland, that we shall take a retrograde course and return to inoculation.

Dr. Gregory, upon whose opinions Dr. Copland has somewhat too exclusively relied, has, it is well known, directed his efforts for some years to the laudation of Inoculation, and the depreciation of Vaccination. He remarks with regard to the “Vaccination Act,”—“On the 23d of July, 1840, the practice of Inoculation, the introduction of which has conferred immortality on the name of Lady Mary W. Montague” (we do not perceive the relevancy of this observation), “which had been sanctioned by the College of Physicians” (the sanction of the College of Physicians, when transferred to Vaccination, is elsewhere held in less honour), “which had saved the lives of many thousands during the greater part of the preceding century, was declared illegal by the English Parliament.”

Dr. Copland has assumed that the protective power of vaccination uniformly becomes exhausted after the lapse of years—a statement which, in our estimation, is sufficiently contradicted by the comparative infrequency of small-pox since the introduction of vaccination. It must be obvious to the most superficial observer that persons marked with small-pox are but rarely met with.

Dr. Copland represents the severity of variolous disease to be in proportion to the length of time that has elapsed since vaccination—a statement to which

we demur, as not established upon a sufficient number of facts.

Dr. Gregory has employed statistics in support of his views, and has constructed a Table, quoted by Dr. Copland, which attributes to small-pox after vaccination a higher rate of mortality than we believe appertains to it, and thereby *pro tanto* presents a false estimate of the value of vaccination. This Table gives the per-centage of deaths of all cases of small-pox from 1841 to 1850, as 22; of those vaccinated and having cicatrices, as 7; of the unprotected, as 36. We have good reasons for asserting that the mortality here given of the cases after vaccination is far too high; and we here give them.

In June 1849, Dr Gregory communicated to the Medical Times a Retrospect of the Variolous Epidemic of 1847-8, as it appeared in London. In that paper Dr. Gregory stated that, “of the 365 vaccinated *with* cicatrices, there died 38, or nearly 11 per cent.” These numbers are repeated for 1848, without any deduction, in the Table given in Copland’s Dictionary, from which the general average of mortality has been drawn. But what was our surprise, on reading in the “Retrospect” above quoted, that 12 at least of these 38 cases died of *erysipelas, gangrene, &c.*! So that, instead of “nearly 11 per cent.” (or 10·4, more correctly), the mortality ought to be at once reduced in this single year from “nearly 11 per cent.” to 7. Is not this something like “cooking” statistical results?

Cases of hospital fever, erysipelas, gangrene, &c, are reported from the Small-pox Hospital, in the Registrar-General’s Weekly Returns for 1848. We were induced to consult those records from having met with a case of “gangrene” published in the same official document for the week ending Nov. 15, 1851.

Now it is perfectly clear that, if the deaths here referred to be included in

the Return, the mortality is unduly increased, and the *real extent of the protective influence of vaccination misrepresented*. Dr. Gregory has, however, not altogether withheld these facts, as he subsequently observes—"The great difficulty with which we had to contend throughout the greater part of the year 1848, but especially in the months of April, August, September, and October, arose from erysipelas, and those associated affections (pudendal gangrene, cynanche, peritonitis, diarrhoea, &c.) which, in a recent number of the Medical Times,* I generalised under the name of OCHLESIS. *Never, probably, since the foundation of the hospital, had the Ochletic miasm so thoroughly pervaded the wards.* Erysipelas facialis, the normal type of the malady, was of an *exceedingly grave character*. It affected very many of the convalescents from the severer types of small-pox, and not a few of those affected with *mild attacks of varioloid disease*."† By the commonest rules of arithmetic—still more, upon the ordinary principles of scientific calculation—the deaths here distinctly referred by Dr. Gregory to other causes than small pox should not have been included in the mortality from that disease. Dr. Gregory himself admits the importance of their separation when he remarks:—"It is *difficult* to separate the mortality by erysipelas and ochlesis purely, from that by the accompanying" (*preceding?*) "*variola*; but I may state that, of the total number who died (168), 28 displayed symptoms of the *superadded* malady—viz., 11 among the unprotected class, 12 among those vaccinated, with cicatrices, and 5 among those vaccinated, without cicatrices."

Abundant additional evidence may be found in Dr. Gregory's writings of

the frequency and extent of superadded mortality to small-pox, from ochletic diseases. As we have already observed, however, *no deduction on that account* is to be discovered in the table quoted by Dr. Copland! We must again emphatically express our regret that the "Dictionary of Practical Medicine" should have thus been made the medium of the transmission to future generations of practitioners, of conclusions drawn to the prejudice of vaccination from premises so erroneous, and data so distorted.

Even taking the data as they stand, we cannot find a justification for the conclusions at which Dr. Copland appears to have arrived,—a real mortality of 7 per cent. on the one hand, and a contingent one of 36 on the other! When we take into consideration the carelessness with which vaccination is but too often performed, and the looseness, as shown above, in which this mortality of eleven per cent. from small-pox after vaccination has been arrived at, we cannot believe for one moment that the profession will advise, or the legislature will give its sanction to, any such alteration as that proposed—viz., a return to variolous inoculation. This change could not be made, indeed, with any show of reason. If vaccination were rendered compulsory by law at an early age—say at three months—SMALL-POX, even according to the most unfavourable view of the question, would be still further reduced in its proportionate fatality. We feel convinced that, under a more extensive diffusion of careful vaccination, the present mortality which its adversaries prove to be no more than 7 per cent., would be reduced to a very small per-centage indeed,—probably not exceeding 2 or 3 per cent. If it were possible to secure in every case absolute perfection of vaccination, small-pox would probably scarcely ever be known as a fatal disease.

* Medical Times, March 31, 1849. We refer our readers to this paper for an account of the extent to which these diseases prevailed.

† The italics are our own.

It is to us a source of unmitigated astonishment that at the present day, when the claims of Jenner's memory to the universal gratitude of man have been admitted all over the civilised world,—an attempt should be made to supersede them. The omissions and errors which we have pointed out are, we consider, sufficient to vitiate every inference drawn in favour of the re-establishment of inoculation. It is not, therefore, without reason, that we urgently call attention to the labours of the EPIDEMIOLOGICAL SOCIETY, which we sincerely trust, for the sake of the interests of society, and the character of our profession, will be energetically seconded, in order that data may be obtained by which to set at rest at once, and for ever, one of the most important questions that can engage the attention of medical philosophers. We look to such a society as this for sweeping away the cobwebs of sophistry from the history of contagious diseases, for separating false from true facts, and for proving to the world that figures arrayed in statistical tables are worse than useless, unless collected with care, and used with judgment and discrimination.

Reviews.

Annales d'Hygiène Publique, et de Médecine Légale. Tome XLVI. Juillet et Octobre, 1851.

IN the present volume of the Annals the series of papers by M. Trébuchet, on the *Mortuary Statistics of Paris*, are brought down to the year 1848, and these and the preceding articles supply a body of facts regarding the subject of disease, both in private life and in civil and military hospitals, whose importance to the statistician it would be difficult to over-estimate. The extent of these, however, puts it out of our power to make any selection which would give a correct idea of their value.

Prostitution, as a public question, has here two papers devoted to it. One of

these is a translation, with foot-notes by M. Guérard, of the introductory chapter in Mr. Acton's recent work on syphilis. The other is by M. Sandouville. This writer advocates the enforcement of more stringent regulations than those now in use in France to restrict the spread of venereal disorders amongst the community. In proof of the efficacy for this end of even imperfect sanitary measures, he adduces the rules adopted at Brest, and the results obtained at Doullens and Alençon. The comparative inutility of such legal restraints on immorality appears, however, to be too well established, when we find, as we do at present, both in France and Germany, a simultaneous admission to this effect, and calls for sterner means to put down this spreading vice.

A paper on *Artificial Light* is occupied with comparative details of the illuminating powers of the various combustible materials in common use for lighting purposes. The details are purely scientific, and consequently possess but a secondary interest for the medical reader.

The notice of a memoir presented to the Institute by Mr. Philips on his *Fire Annihilator*, and reported on by MM. Dumas, Pouillet, and Despretz, affords occasion to M. Chevallier for an interesting and curious sketch of the methods proposed at various periods, and by a variety of projectors, for the extinction of conflagrations in buildings, &c. In Paris, the failure of the annihilator does not appear on trial to have been so complete as in this country.*

Studies by M. Boudin, *On the Moral and Physical Influence on Man of the Double Rotation of the Earth*, completes the subjects discussed in the first division of the journal. M. Boudin first notices the effects of the diurnal rotation of the globe on the temperature of the body, and on the periods of natural death, and that by suicide. He then enters on a more extended collocation of facts relative to the annual movements of the earth around the sun, and examines its bearing on the weight and secretions; on the mental faculties, moral and intellectual; on generation and conception, and on human mortality. He finds, for instance, that in France the number of cases of insanity,

* Vide MEDICAL GAZETTE, Vol. xlv. p. 1094.

suicide, and crimes against the person, increase with the annual rise of temperature—the reverse of what takes place with the amount of crimes against property. He further finds that the ratio of conceptions varies with the months of the year, independently altogether of the unequal distribution through these of the time of marriage. The maximum of births, again, occurs between midnight and 6 o'clock in the morning; the minimum, betwixt mid-day and 6 o'clock in the evening; while, for the whole of France, the maximum and minimum of deaths correspond respectively to the months of March and April for the one, and those of June and November for the other.

In the MEDICO-LEGAL department of the Annales, MM. Chevallier and Duchesne continue their memoir *on poisoning by oysters, mussels, and certain sea and river fish*. In this and the concluding part of their previous paper devoted to fishes, we are furnished with a list of 40 species mostly belonging to different genera, inclusive of a few not hitherto noticed in our works on toxicology. In all of these, however, the injurious effects to which they are liable to give rise when used as food are not constantly witnessed. It is only in certain localities, and when particular parts of the animal are partaken of, that poisonous symptoms are caused by them.

Several ready tests are proposed by our authors to guard us against the use of poisonous fish. Thus, we are told that if a portion of the liver of the suspected animal is rubbed against the lips, it gives rise to a peculiar smart and prickling sensation at the part, accompanied with more or less tumefaction, and considerable pain. The same effects also are said to be produced on the lips in the case of the larger fishes of this order by applying to them the tips of the finger previously introduced into the anus of the fish. The two remaining tests are obviously of little value—viz., the exhibition of the viscera of the suspected fish to poultry, dogs, or pigs; and the blackening of a silver spoon from contact with the cooked animal. This last appearance would be caused by any sort of fish, if too long kept.

The usual effects ascribed to this class of poisons are those common to many of the narcotico-acrids—local irritation

of the intestinal tube, succeeded by marked depression of the nervous and vascular systems. Most of them in addition manifest a special irritant effect on the skin, and several of them on the urinary organs. In the less serious cases the recovery is slow, the patients suffering from obstinate pains in the limbs, and particularly in the joints. Ptyalism is a very usual sequela on these occasions.

None of the causes assigned in the opinion of our authors satisfactorily account for the noxious properties of the poisonous fishes: nothing new is advanced by them in regard to treatment.

The most valuable article in the present volume is the memoir by Orfila on *Nicotine and Conicine* (Coneia). The attention of Orfila was specially called to these poisons in connection with the celebrated proceedings in the case of the Count de Bocarmé, tried in spring for the murder of his brother-in-law, and executed at Brussels in August last. A full report of the trial appeared at the time in the "Times" newspaper (vide Times of 2d, 4th, and 7th June, 1851): but the medical jurist will do well to consult the account here given of the mode of detection, and the testing of the poison actually discovered in the body of the victim. After a series of numerous and delicate researches, distinct traces of narcotine were detected by M. Stas, the medical examiner, in the tongue, and the alcoholic fluid in which it had been kept, in the lower jaw, in the back of the mouth, in the larynx, in the contents and in the tissues of the stomach, in the liver and lungs, as also in a pair of pantaloons belonging to a workman who had assisted in the preparation of the poison, and in some wooden boards from the floor of the room in which the crime had been perpetrated. At first it was suspected that the toxical agent had been either the sulphuric or acetic acid, though subsequently the true poison came to be pretty clearly ascertained. Previous to this discovery, however, M. Stas had arrived at the conclusion that it must have been either nicotine or coneia, from his having succeeded in separating a volatile alkali which was not ammonia, the only other known volatile bases being the two just named.

The subsequent proceedings, to confine ourselves to the contents of the

stomach and intestines, consisted, after neutralising the free acid present in the fluid with potass, in taking up the base in question with ether, and evaporating the ether spontaneously, when it was left in the form of an oily fluid which was darkened by heat, and gave off colourless fumes, acted characteristically on turnsol paper, produced a sensation of heat and constriction in the throat, and became white when brought into contact with the vapour of hydrochloric acid. The same fluid, when exposed to the air for twenty-four hours, left on the glass a dry brownish substance, which communicated to the tongue a sharp tobacco-taste, followed speedily by a sense of heat and even of burning, when in any quantity. It dissolved readily in water, and the solution, when neutralised with oxalic, tartaric, phosphoric, or hydrochloric acids, yielded compounds more or less perfectly crystalline, possessed of the sharp tobacco-taste, and other properties distinctive of the alkaloid nicotine. Of these, the most characteristic were the hydrochlorate, yielding yellow needle-shaped crystals, insoluble in ether, and very deliquescent, and the double chlorides, with the bichloride of mercury, and the chlorides of palladium, cobalt, and nickel. The compound thrown down by the alkali from the biniodide of potassium was also very characteristic. It speedily coalesced into oily drops of an intense red colour, which finally took the form of a crystalline mass.

The process advised by Orfila, for the separation of nicotine from the contents of the stomach and the tissues of the body in cases of poisoning with this base, does not differ essentially from that of M. Stas. After its isolation by ether, he proposes to neutralise it with extremely diluted sulphuric acid, in place of the oxalic acid employed for this purpose by the latter chemist.

The properties of *conicine* (coneia), as elicited by Orfila, have been already noticed in a previous number of the GAZETTE.*

The succeeding memoir on *poisoning with the salts of iron* is also from the pen of Orfila. We have already had the opportunity of calling the attention of the profession to the increased use lately of the sulphate of iron for poison-

ous purpose in France.* To the instance formerly adverted to, M. Orfila has added the details of a case tried in June last (1851), in which the chemical investigations were entrusted to him, in conjunction with MM. Chevallier and Mialhe.

The criminal charge accused a woman of 26 (Marie Bureau, widow Vivien), with having administered to her infant child of 16 months, 50 grammes (more than 3iss.) of protosulphate of iron, with intent to destroy it; a dose which was speedily followed by incessant screams, repeated vomiting and purging of black discharges, and vomiting of violet-coloured blood. The child survived from ten in the morning till the evening of the following day. At its death there was froth at the lips, and a black fluid, issued from its mouth which stained its lips. On its disinterment, ten days after, the medical inspector describes the cerebral vessels and the heart as having been found gorged with dark blood, and the stomach full of a greenish-white liquid. Orfila and his colleagues found iron in notable quantities in the intestinal canal, on a broom found in the house, in traces of alimentary matter, on a metal spoon, on earthen slabs from the floor, and on the infant's clothes; and gave it as their opinion that the absence of inflammatory appearances in the abdomen was no proof that the child had not been poisoned by sulphate of iron. The chemical investigations in this case are given at full length. It may suffice, however, to state that the process recommended for the recovery of the salt of iron in the body is, after washing away the soluble salts from the tissues cut into fragments, to treat these with warm water acidulated with either the hydrochloric or acetic acids, when the solution will remove the iron in union with these acids; or, in place of this, the dried tissues are to be incinerated when, the ash will be found to contain the iron if present in the form of sesquioxide. The woman was found guilty of the charge, and condemned to hard labour for life.

In a memoir on the so-called *spontaneous human combustion*, M. Devergie attacks the conclusions and arguments advanced by Bischoff and Liebig in the famous Goerlitz case,† contending that

* Vide MEDICAL GAZETTE, vol. xlviii. p. 218.

* Vide MEDICAL GAZETTE, vol. xlvii. p. 307.

† Vide MED. GAZ. vol. xlv. pp. 899 and 944.

the question—at least, as concerns the alleged occasional preternatural combustibility of the body—is by no means satisfactorily disposed of by the evidence and experiments of these celebrated chemists. He has, however, added but little, either in the way of facts or arguments, to his former writings on this vexed question. His strongest point appears to us to be the undoubted circumstance that, in a few well-authenticated cases of the sudden death of old persons (chiefly females) of intemperate habits, an amount of destruction of their tissues is encountered which the quantity of combustible matter which has given rise to it does not satisfactorily account for, unless on the assumption of an unusual degree of combustibility of their soft parts.*

In the concluding paper, also by Devergie, *On Poisoning by Tartaric Acid*, we are furnished with two illustrative cases—the one of death from the swallowing of the acid itself, and the other from the ingestion of the bitartrate of potass.

The former of these cases—one of double poisoning—is not so complete as we could have wished. The dose of the acid is not known, and little could be ascertained of the symptoms it gave rise to. The parties, a woman and her paramour, who had been drinking through the day, after retiring for the night to the apartment of the latter, were both suddenly taken ill; and, between three and four hours after, the former was found dead, and the latter in a state of insensibility. By the use of emetics the man recovered, but could give no satisfactory account of the illness of his companion. Cries and groans had been heard by some of the people in the house at and previous to the discovery of the woman's fate. On the examination of the body of this person, a fine white froth presented itself in the mouth and on the hands; the lining of the mouth and œsophagus was white; the epithelium was detached from the cardia; the stomach contained reddish and violet-coloured fluids along with alimentary matters; its interior was rosy, with arborisations and ecchymoses; the interior of the duodenum and jejunum were white; the liver of a currant red; the ramifica-

tions of the bronchi full of nonsanguinolent froth; the lungs engorged with fluid blood; the blood in the heart clotted, and the general mass of its fluid very glutinous (*très poisseaux*), and of a currant-red. Tartaric acid was discovered by MM. Bayard and Devergie in the stomach, intestines, liver, and blood, and in fluid vomited by the survivor. No free acid was discoverable in a specimen of the wine of which the parties had partaken. The conclusion arrived at by the examiners is that the death of the woman and the illness of the male had been the effects of swallowing this acid.

The case of poisoning by *cream of tartar* appeared formerly in the *Journal de Chimie Médicale* (1838, p. 72). The dose exceeded 125 grammes (almost \bar{z} iv.), and was fatal on the fourth day, leaving traces of active inflammation along the whole of the intestinal tract.

Lectures on the Physical Diagnosis of the Diseases of the Lungs and Heart.

By HERBERT DAVIES, M.D., Senior Physician to the Royal Infirmary for Diseases of the Chest; Assistant-Physician to, and Lecturer upon Materia Medica at, the London Hospital; and formerly Fellow of Queen's College, Cambridge. 8vo. pp. 288. London: Churchill. 1851.

THIS is a small volume upon a very extensive subject, but it is nevertheless a book well worthy of the closest study of the physician. It might have been supposed that little remained to be said at present, having the claim of originality, upon the diagnosis of diseases of the chest; so numerous have been the valuable works that have appeared, upon thoracic disease, from that of the author's father, who first brought the utility of the stethoscope practically before the British professional public, down to the recent complete treatise of Dr Walshe;—but Dr. Herbert Davies has here demonstrated the contrary.

If it be borne in mind that the substance of this work consists simply of lectures delivered to students at the Royal Infirmary for Diseases of the Chest, we think the reader will concur in our opinion, that the author has eminently succeeded in bringing under notice, within a small compass, all the most valuable facts which relate to the theory and practice of auscultation.

* On this point we had occasion to make some remarks in a former volume. Vide *MED. GAZ.* vol. xlviii. p. 168.

A prominent object, however, with Dr. Davies, has been, at the same time, to direct the attention of his medical brethren to the views of Professor Skoda, of Vienna, the "acknowledged head and founder" of the "distinguished school of that city." The author has not, however, exclusively introduced the investigations of this original observer, but has embodied, in his essentially practical discourses, the observations of the most eminent British and foreign authorities. In justice to the author, we must also add that he has diligently compared these opinions and statements with his own experience in public and private practice.

Our space forbids our presenting such an analysis of this work as its intrinsic value merits. We must therefore content ourselves with little more than an enumeration of the topics discussed.

The first lecture gives the statistics of diseases of the chest, as derived from the official reports of the Registrar-General, and presents the startling fact that one-third of the entire mortality of the country is due to diseases of the respiratory and circulatory organs; and that nearly one-sixth of the deaths occurring in any year is referrible to consumption alone. It is surely superfluous to dwell upon the importance of the subjects of these Lectures, in the face of such facts.

The author introduces in his two first lectures a short sketch of the anatomy and physiology of the organs within the chest.

The three next Lectures refer to the subjects of spirometry, inspection, mensuration, palpation, succussion, and percussion.

The fifth Lecture enters into an examination of the causes of the respiratory murmur, and of bronchophony. Ægophony, as closely allied to bronchophony, follows next, and is followed by bronchial respiration, rhoncus crepitans, crepitation, amphoric resonance, metallic tinkling, and the theory of the stethoscope.

The remaining seven Lectures are engaged upon the physiology and diagnosis of heart-sounds.

A few extracts must be added in order to enable our readers to judge of the author's lucid style of presenting the condensed information he has to convey.

The following passage may be taken

as conveying a principle observed throughout by Dr. Davies—viz., that of placing before his hearers only those essential and important facts which must be held in mind as the cardinal points around which less important facts congregate, and to which, for all useful purposes, they must be referred and compared.

"This author (M. Fournet) has subdivided this sound (*rhoncus erepitans*) into further varieties, corresponding to pulmonary congestion, pneumonia, œdema, and acute catarrh, under the belief that the moistness of the sounds is sufficiently distinct in each case to establish a diagnostic mark between them—an excess of refinement which you will find to be by no means borne out in practice. In fact, I believe that nothing has tended more to discourage the student in the study of auscultation than the immense variety of sounds which he finds laid down in books, as occurring in pulmonary disease, and which he must be supposed to be able to detect before he can be allowed to be a master of the science. The excessive subdivision of sounds has only served to throw a mystery around the whole art of thoracic examination, and to deter the student from pursuing a subject which is really simple in itself, and requires a very slight acquaintance with the laws of acoustics to comprehend."

In these sentiments we fully concur, having on other occasions deprecated the over-refinement with regard to the physical signs of thoracic disease, indulged in by many writers, who, we doubt not, with ourselves, find their subtleties of little practical utility at the bed-side. Dr. Davies expresses an equally strong opinion upon the superfluity of plessimeters, of which he justly remarks, none can equal "the simple and handy one with which we are naturally endowed—the index and middle fingers of the left hand."

The author adopts the useful plan of briefly summing up the chief points or conclusions of each topic brought under notice. Thus of Ægophony, the conditions, according to Laennec, required for the production of the sound are thus stated:—

- "(a). Flattened bronchial tubes.
- "(b). Compressed lung.
- "(c). Slight effusion of fluid into the cavity of the pleura."

Again, the causes of bronchial respiration are thus stated:—

"1. A bronchial tube, or space of certain size.

"2. Consolidated or compressed lung—*i. e.* airless parenchyma surrounding the tube or space.

"3. Absence of secretion in the tube or space, so that a perfect freedom of communication may exist between the cavity and the upper part of the respiratory passages."

In the following passage, Dr. Davies presents Professor Skoda's theory of the impulse of the heart against the ribs:—

"The heart is supposed to have a swinging motion in systole, which causes it to move in a direction downwards and forwards, at the same time that the muscular contraction producing this movement alters the shape of the organ, and tilts up its apex. The swing by which sufficient momentum is acquired to produce the characteristic impulse is simply the movement due to the recoil of the heart, the principle of which may be briefly explained in the following manner:—Suppose a vessel of any shape to contain a quantity of fluid (liquid or gaseous), which exerts a pressure upon every portion of its internal superficies. Then, so long as the vessel is closed on all sides, the pressure being equal in all directions will give it no tendency to move in any particular direction. But suppose a part of one of its sides to be suddenly removed, and a free passage allowed for the exit of the contained fluid, the equality of pressure upon two opposite sides of the vessel will be destroyed, from the loss of pressure at the orifice, and the greater force exerted upon the internal surface of the vessel opposite to the opening will tend to move the vessel in a direction the reverse of that of the issuing fluid. A vessel with a narrow base containing fluid may be upset by allowing its contents to escape from an opening in one of its sides." (p. 176.)

The author further illustrates this theory by reference to Barker's mill, and the motion of the ordinary rocket; and then resumes the analogy between these motions and that of the heart:—

"The blood in the ventricles being powerfully compressed in the moment of systole, reacts with a corresponding force upon every portion of the inner surface of these chambers; and, on the valves being suddenly thrown back by the rush of the blood through the orifices of the aorta and pulmonary artery, the pressure at three outlets is reduced to nil, and the non-counterbalanced pressure upon the surfaces

exactly opposite to the orifices tends to swing the organ in a direction downwards forwards, and to the left side" (p. 178).

Dr. Davies traces the influence of the combined action of the two ventricles upon this hydrostatic principle.

We have not dwelt more particularly upon the doctrines of the Vienna school—not because we undervalue them, but because they are interwoven with the texture of Dr. Davies's work, while the latter, however, possesses the features of an entirely distinctive and independent treatise.

We strongly urge upon all students of thoracic pathology to make themselves acquainted with the contents of this volume. The author has evinced the possession, in a high degree, of the capacity of acquiring knowledge: he has also exhibited the still rarer faculty of imparting instruction. We have met with few works which so clearly convey useful information in a comprehensive form as this short treatise by Dr. Davies, which we cannot but hail as the first-fruits of a still more abundant harvest from so accomplished and industrious a labourer in the fields of medical science.

On the Pathological Anatomy of Bronchitis, and the Diseases of the Lung connected with Bronchial Obstruction.

By W. T. GAIRDNER, M.D., &c., &c. 8vo. pp. 82. Edinburgh: Sutherland and Knox. 1851.

DR. GAIRDNER has been led by his own personal observations to believe that the commonly received doctrines as to the ultimate effects of bronchitis on the pulmonary texture are not altogether correct or consistent with the truth of nature. He has, therefore, especially and very diligently investigated this subject, and here submits his results, which we think demand the attention of pathologists.

The primary results of bronchitis are the accumulation of mucus or inflammatory products; and the consequent obstruction of the tubes. Secondary and more permanent effects are disorganizations of the texture of the lungs.

We regret that we cannot quote the author's observations upon the nature of collapse of the lung—a pathological state of vast importance to the other disorganised states of the lung, and of which we have never before seen so

clear and satisfactory an explanation. This is the principal subject of the essay, and we must, for want of space, refer our readers to it.

Dr. Gairdner does not submit exclusively his own observations, but cites from the best known and most trusted pathologists; *e. g.* Laennec, Louis, Andral, Jörg, Fuchs, Rokitansky, Barthéz and Rilliet, Bailly and Legendre, Alderson, Dr. West, and Dr. Baly. The statements of Dr. West approximate very closely to those of Dr. Gairdner.

The author gives us an exposition of those morbid changes which have been recognised under the name of *Bronchial Abscesses*, and which have been described by French writers under the expression, "*vacuoles*." Dr. West has also directed attention to this termination of bronchitis in a true lobular pneumonia: from this view Dr. Gairdner differs, regarding them as originating in collections of mucus in the obstructed bronchi leading to collapsed lung, the coats of the tube becoming diseased and ultimately ulcerated from the presence of accumulated secretion.

In the succeeding part of his work Dr. Gairdner treats of the secondary results of bronchitis, or the permanent disorganizations depending on collapse of the lung, &c. With reference to the curability of pulmonary collapse, the author concludes that when recent and uncomplicated it is susceptible of cure, by the removal of the bronchial secretion, through the agency of the contraction of the bronchial muscles and other muscles of respiration, while derangement or paralysis of the deobstruent function of the bronchial tubes becomes a cause of obstruction or bronchial accumulation.

The small space we have to spare forbids our following Dr. Gairdner through his explanation of the nature and causes of emphysema. We may briefly state that the author's explanation is to the effect that emphysema depends upon the expansion of some cells as a compensatory consequence of the collapse of other portions of the lung. The reader must consult Dr. Gairdner's papers for the full exposition of the theory, which for a large proportion of cases of emphysema is the only satisfactory theory that we have seen.

Dr. Gairdner traces the effects of

collapse in the production of deformity of the chest, and dilatation of the bronchi, cicatrices of the lungs, &c.

We confidently speak in the highest terms of commendation of Dr. Gairdner's work on bronchitis; we regard it as an eminent example of the employment of inductive reasoning in pathological science. Such works most effectually rescue medicine from the opprobrium of being a mere conjectural science, when the basis of therapeutical indications can be thus logically demonstrated.

This is a small volume, and therefore within the reach of all, and we would advise every medical practitioner who has a regard for his own scientific advancement to possess himself of so valuable a monograph.

A Contribution to the Statistics of Rupture of the Urinary Bladder; with a Table of Seventy-eight Cases. By STEPHEN SMITH, M.D., Assistant-Surgeon to Belle-Vue Hospital, New York. 8vo. pp. 43. New York. 1851.

DR. SMITH has taken pains to collect the records of cases of rupture of the bladder which are scattered throughout medical and surgical works and periodicals, and has commented upon the following points in the history of this accident, which possesses interest in a pathological and in a medico-legal point of view:—

Sex and age,—its greater frequency in the male, owing to several obvious causes; condition of the bladder at the time of the accident; fulness. Causes,—direct or indirect violence, concussion, or internal causes. Symptoms; diagnosis; prognosis; pathology; treatment; medico-legal relations.

The tabular statement of seventy-eight cases affords statistical information upon the sex and ages of the patients, the symptoms, progress, treatment, result, pathology, and condition of bladder at the time of the accident.

To the practical surgeon, as well as to the medical jurist, this paper will be found equally valuable.

On the Morbid Conditions of the Bile and Gall-bladder. By EDWARDS CRISP, M.D. 8vo. pp. 18. London. 1851.

In this paper the author has carefully collated the opinions of numerous writers, and has added the results of his

own experience and observation; the whole constituting an interesting and instructive monograph.

Inaugural Address, delivered at the Opening of Sydenham College, Birmingham.

By JOHN HAYES, Lecturer on Anatomy, Physiology, and Pathology. Pamphlet, 8vo. pp. 24. London: Churchill. Birmingham: Langridge.

THIS address forms a very eloquent appeal to the student, setting before him the usual topics of inducement to industry and activity, but presenting more particularly the especial features of the Sydenham College, which consist in a frequent periodical medical supervision by a certain number of practitioners residing in Birmingham, and not being otherwise officially connected with the college.

We may fairly anticipate very good results from the energy and anxiety manifested by the projectors and teachers of this school faithfully to fulfil the very responsible duties which they have undertaken.

On the Transmission from Parent to Offspring of some Forms of Disease, and of Morbid Taints and Tendencies.

By JAS. WHITEHEAD, M.D., F.R.C.S., &c. &c. 8vo. pp. 351. London: Churchill. Manchester: Simms. 1851.

THIS work contains five chapters; the first consists of a very interesting and instructive dissertation upon the doctrine of the hereditary transmission of disease, varieties of races, and an enumeration of the diseases usually considered to be hereditarily transmissible. The other chapters are occupied entirely with a consideration of the various forms under which syphilis is transmitted, and the effects which are produced by that disease in the offspring for successive generations. A melancholy record, truly, is here presented in the cases narrated by the author. One shudders at the very thought of the misery that is entailed upon innocent offspring by the vicious indulgences of reckless and debauched fathers. The picture is in some degree, though very little, relieved by the chapter on treatment, which concludes the volume.

Medical practitioners should carefully read this work, which will better fit them to deal with the anomalous and

perplexing cases of transmitted disease occasionally met with in practice.

Comments on Convulsive Diseases. By CHARLES BLAND RADCLIFFE, M.B., &c. Pamph. 8vo. pp. 45. London: Churchill. 1851.

THIS pamphlet is a reprint of a series of papers which have appeared in the Medical Times. It contains an application to the theory and treatment of convulsive diseases of the author's views as expounded in his work on "The Philosophy of Vital Motion," which we have fully noticed on a former occasion.

Dr. Radcliffe regards convulsive action as resulting in every case from the abstraction of vital energy, rather than from the addition of stimulus, and his therapeutical indications are guided by this theoretical view, which we may observe is very ably argued, and supported by a large number of facts and legitimate inferences.

We consider this monograph to be a very important addition to the scientific literature of the pathology of the nervous system.

Proceedings of Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

MR. HODGSON, THE PRESIDENT, IN THE CHAIR.

Tuesday, November 25, 1851.

A Successful Case of Parturition in a Patient who had previously undergone Ovariectomy by a Large Incision. By JOHN CROUCH, M.R.C.S., Bruton, Somerset. [Communicated by SAMUEL SOLLY, F.R.S.]

THE subject of this case was a healthy young woman, twenty-six years of age. Two years ago a multilocular ovarian cyst, weighing fourteen pounds, was removed by a long incision. Five weeks after the operation she walked a distance of five miles. During the next winter the catamenia appeared at regular intervals, and her health was good, except that she had an occasional pain in the left groin, and a slight difficulty in micturition, sometimes followed and relieved by a muco-purulent discharge in the urine. In 1850 she married, and on the 9th of October last she was delivered of a

male child, after a lingering labour. It had been feared that the expansive powers of the parietes of the abdomen would be impaired by so large a scar passing through their centre; but it was found that the skin dilated naturally, and that the cicatrix itself had increased in length three inches, and in breadth one-sixth of an inch, during the period of gestation. Seven weeks after the delivery, the cicatrix in the abdomen had returned to the same dimensions as before the pregnancy—five inches and a half in length, and a quarter of an inch in breadth.

On the Diagnosis and Treatment of Ovarian Disease, with the History of One Hundred and Fifty-six Cases. By ROBERT LEE, M.D., F.R.S., Fellow of the Royal College of Physicians, &c.

The author commences with a description of the human ovary, its coats and stroma, and the structure of the Graafian vesicles; and he then notices the condition of the organ before puberty, and the changes which take place at that period, after impregnation, and when the catamenia have ceased. Adhesions of the ovario-Fallopian tubes and uterus are very common. In the unimpregnated state this arises most commonly from inflammation of the peritonæum only; but in puerperal women all the component structures of the ovaries suffer. Thickenings of their coats sometimes are found when there has been apparently no inflammation. Inflammation of the parenchymatous structure terminating in suppuration, in the unimpregnated state, is rare; and the author believes that in those cases where abscesses of the ovaria have burst into the bladder or rectum, they have been the results of scrofulous disease, and not of simple inflammation. Fibrous tumours are sometimes met with in the stroma of the ovaries, which have the same structure as those of the uterus: malignant or cancerous disease also affects the stroma. Both fibrous tumours and malignant diseases are most frequently met with in combination with diseases of the Graafian vesicles, though they may occur without this complication. The greater number of the complex, compound, or multilocular cysts met with in connexion with the ovaria originate in the Graafian vesicles; but it is probable that cystic diseases of a different nature are sometimes set up in the walls of enlarged Graafian vesicles. The author refers to the dissection of an ovarian cyst, published in the last volume of the *Transactions*, to show that compound cysts are formed independent of each other, and that the smaller cysts do not grow from the inner surface of the larger ones, but are formed in the

stroma of the ovaries external to each other. After noticing the varieties observed in the course of ovarian tumours, the author refers to the table of 166 cases of these diseases. In 41, or more than a quarter of the whole, sterility existed, showing a previous unhealthy state of the uterine organs. In 92 the disease occurred between twenty-four and forty-four years of age, while the uterine system was in the most active state. In several cases tapping was performed eight or more times, and in no instance was followed by an immediately fatal result; where death took place after tapping, it was attributable rather to the advanced state of the disease than to the operation. The difficulties of diagnosis in some cases of ovarian tumours are pointed out, as in cases of death of a foetus. The general symptoms may be the same; and it is only by a careful examination of the lower segment of the uterus internally that in any case it can be positively determined whether the symptoms depend on pregnancy or on some ovarian disease. The soft and thick state of the lips of the os uteri, the shortening of the cervix, the expansion of the body, and the floating of the foetus, would allow of a positive opinion being formed. "If the uterus be unimpregnated, drawn up, and turned to one side, or pressed forward, backward, or downward, and the cavity of the pelvis be filled more or less with a mass which can be felt occupying the brim—and more or less of the abdominal cavity—hard, or soft, and irregular in some portions, with fluctuation in others, we may conclude that the disease is ovarian." For the diagnosis of ascites as distinguished from ovarian dropsy, the author refers to the description given by Dr. Watson, and adds to this the fact that in ascites the fluctuation is usually more distinct, and that there is an absence of that irregular hardness usually felt in the abdomen when enlarged with ovarian cysts, as also of any unhealthy feeling in the contents of the pelvis. In the latter stages of ovarian disease these diagnostic signs become more obscure. The diagnosis of fibrous tumours of the uterus and ovarian cysts and tumours can, according to the author, be drawn with sufficient accuracy without the use of the uterine sound; and he instances cases in which the employment of this instrument has been productive of evil. Where fibrous tumours are imbedded in the walls of the body of the uterus, the whole organ is felt enlarged and heavy, and the cervix is sometimes shortened, as in pregnancy. Attacks of menorrhagia occur, the functions of the bladder and rectum are disturbed, and there are usually pains, with signs of interrupted circulation of blood, in the lower extremities. When cavities filled with fluid

exist in the deeper parts of fibrous tumours, the diagnosis is sometimes rendered extremely difficult, if not impossible. With regard to treatment, the author does not put much confidence in the usual remedies. Opening and injecting the cysts has generally been effected by leaving a small canula or bougie in the opening after tapping; and a case is related, communicated by Mr. Phillips, in which the plan of drawing off only a small quantity of the fluid, and fixing a small elastic gum catheter in the wound for five days, was followed by a gradual diminution of the tumour. In a few cases the long-continued use of iodine and liquor potassæ has produced a diminution of the tumour; but in the majority of instances these remedies have done no good or have done harm. The author prefers treating the disease by the use of saline purgatives and diuretics, light diet, and the avoidance of much exertion, and of every cause likely to irritate the morbid structures. In conclusion, the author refers to an analysis of 162 cases of ovariectomy, published in the last volume of the *Transactions*. In 60 there was either no ovarian tumour, or the removal was impracticable; 19 of these proved fatal. Of the remaining 102, in which the operation was completed, 42 terminated fatally, and the present condition of the 60 patients who recovered is very imperfectly known.

PATHOLOGICAL SOCIETY OF LONDON.

DR. P. M. LATHAM, PRESIDENT, IN THE CHAIR.

November 18, 1851.

Dr. BEITH, R.N. exhibited for Staff-Surgeon Dickson,

A portion of the Rectum which, having protruded, had been cut off.

The person on whom this operation had been performed had suffered severely from intermittent fever, and was much debilitated from its effects. While a convalescent, he was attacked with acute dysentery; and, during the efforts to relieve the bowels, a prolapse of the rectum occurred, when, experiencing insuperable difficulty in its reduction, he requested a non-professional friend who had called upon him, to be *so obliging as to cut it off*. This request was complied with, to the satisfaction and present relief of the sufferer. The bowel removed, when examined subsequently, was found to have been cut off by an irregular and oblique incision, so

that it was of the extent of three inches on one side, and only an inch and a quarter on the other. On a close examination it was found that the specimen was composed of all the tissues of the gut. Urgent symptoms set in on the second day after the removal, when more of the rectum was extruded, and subsequently removed by operation, in consequence of the impossibility of treating it by any other method. The patient subsequently recovered.

Dr. BEITH also exhibited, for Mr. DICKSON, several

Specimens of the Guinea Worm,

which had been removed from black soldiers at Cape Coast Castle, where the complaint had been known to be exceedingly prevalent, and showed itself more frequently in the legs, accompanied by great pain and circumscribed inflammation, which very commonly terminated in suppuration. This entozoon has been observed in other parts of the body, as the scrotum, eye, feet, &c.; and the cellular is the particular tissue in which it is found. When the pus which eventually frequently surrounds the worm is let out, the parasite is laid hold of, and a piece of thread tied to it, which is fastened to the leg, and by daily traction more and more of the body is drawn out, until at last it is entirely removed, great care being taken to avoid breaking the creature. It is also sometimes gradually coiled round a quill, and thus withdrawn. Dr. Beith exhibited another specimen, in which the *filaria medinensis* was seen lying *in situ* in coils in the areolar tissue around the tendo-achillis and the lower part of the muscles of the calf of the leg. The specimen was found by Mr. Busk, whilst making a minute dissection of the nerves of the leg of a negro lad who died of tetanus on board the Dreadnought. No symptoms existed during life which could indicate the likelihood of its presence. Dr. Beith referred to an interesting paper on this parasite by Mr. Busk, in the "*Transactions of the Microscopical Society*," vol. ii. p. 65.

Dr. BALY exhibited the diseased parts from a case of

Dysentery, with Extensive Sloughing and Ulceration of the Large Intestines.

In this instance the disease affected in its extreme degree large tracts of the ascending, transverse, and descending divisions of the colon and the rectum. The colon presented very numerous ulcers; some of them many square inches in extent, involving the whole circumference of the intestine; others of the size of a shilling; and others of smaller size, down to that of a split pea. The surface of the

larger ulcerations was, in some parts, dark and ragged from sloughs still adherent, but hanging loosely from the surface; in others, pulpy, as if formed of half-dead areolar tissue; in others, again, it was obviously constituted by the muscular coat laid bare by the destructive process; lastly, in three or four instances even the muscular coat was destroyed, and little more than the serous coat remained to preserve the integrity of the canal. The borders of all the ulcers were far undermined, thin, and ragged. The coats of the intestine at the chief seats of the disease, where not destroyed, were much thickened by effused lymph and blood, and vascular congestion. The rectum presented no large ulcerations, but very numerous small round ulcers, here and there confluent, passing deeply into the thickened coats, and producing a worm-eaten appearance. These ulcers, as well as the smaller ones in the colon, could be clearly traced to enlargement and sloughing of the solitary follicles. Dr. Baly exhibited, in illustration of the morbid changes observed in this case, several coloured drawings by Perry and Bagg. The patient from whose body the intestine above described was taken, was a young woman, aged 24, a prisoner in the Milbank prison. She had been convicted of the murder of her infant child by burying it while alive; and, like many persons of the lower class guilty of extraordinary crimes, was very dull in intellect. Hence she had been ill a fortnight before she made such complaints as caused her removal to the infirmary. She then confessed to having had severe purging, with very frequent stools, and much tenesmus; but when seen by Dr. Baly in the infirmary of the prison, she had those symptoms no longer, but had others which he regards as equally pathognomonic of dysentery and colitis—namely, considerable tenderness of the abdomen, and copious watery discharges, accompanied by symptomatic fever, and a dry, red tongue. These symptoms, according to Dr. Baly's experience, attend inflammation of the large intestines only; and when present, even in typhus and typhoid fever, they may be relied on as indicating a severe affection of that part of the intestinal canal; for the most intense and extensive affection of the small intestines alone, in fever, will not produce copious watery stools, nor, except the peritoncum be involved, any marked pain or tenderness. The patient, in the present case of dysentery, died after a month's illness from the hæmorrhage consequent on the sloughing process.

LIVERPOOL MEDICAL SOCIETY.

MR. HIGGINSON showed

A small Tumour of a Fibro-Cartilaginous Texture,

which he had removed from the palm of a woman's hand. The patient was 40 years of age, and in 1845 had had a similar tumour removed from the same situation. This first tumour had resisted various escharotics; the wound healed kindly. In 1847, a large medullary tumour was removed from the axilla; and the tumour now shown to the society was removed three months since.

Polypus of Cervix Uteri removed by Excision.—By MR. GRIMSDALE.

A woman, æt. 42, mother of six children, the youngest 13 years of age, had for some months complained of bearing down pains in back and groins, and too frequent and profuse menstruation. On examination, a polypus was discovered partially, presenting externally, and attached to the posterior lip of cervix. This was removed by excision on a level with the extremity of anterior lip. On examining the excised mass, it was found that the polypus itself was of the size and shape of a walnut, and what had appeared its pedicle was the prolonged posterior lip of the cervix. No unfavourable symptoms occurred. The patient had menstruated twice since naturally, and is now quite well.

MR. HAKES showed

A Calculus

he had lately removed from a patient's bladder: it weighed 2 oz. 2 drachms, and exhibited a somewhat remarkable roughness in the shape of many isolated spikes, rising $\frac{1}{8}$ th of an inch from its surface. The symptoms of stone had existed for three years. The patient had been sounded several times by a surgeon of note in London at the commencement, and once by a provincial surgeon of celebrity about a year ago, and no stone had been detected. From the very great readiness with which it was discovered by Mr. Hakes, he supposes either that it must have increased in size very rapidly during the last year, or that its position must have greatly altered.

Chronic Recurring Gangrene of Lung.

Dr. CAMERON.

James Daby, æt. 31; admitted into Southampton Hospital, October 14, 1851: five years ago had had cough, with copious hæmoptysis, followed by perfect recovery. During the last eight months return of

ymptoms; gradual increase of cough and expectoration, the latter being at times fetid; frequent attacks of hæmoptysis; much improved by treatment, but health never sufficiently restored to enable him to resume work; became much worse seven weeks previous to admission, when he was found much emaciated; suffering from dyspnœa; cough, with purulent expectoration; pains in various parts of chest; hot skin; quick pulse; but no night sweats or diarrhœa.

Physical signs indicated consolidation of right lung, with cavities in apex.

In a few days, copious hæmoptysis, yielding slowly to treatment, but returning several times with more or less intensity. On the subsidence of the first attack of hæmorrhage, the expectoration became very copious, serous, of a dirty reddish-brown colour, and fetid: breath also fetid; the fœtor of expectoration and breath was very intense when it first appeared, became gradually less, and then disappeared entirely for a short time, reappearing again, almost suddenly, with all its first intensity. He suffered much from severe pleuritic pains in both sides of chest, much severer than what is seen in ordinary pleuritic complications of other thoracic affections. The strength failed rapidly, death taking place on the 15th of November.

Post-mortem Examination.

Right lung.—Thick false membrane enveloping nearly whole organ; recently-effused lymph on outer and lower portion. On cutting into its substance, a series of cavities of various sizes occupied the upper and middle lobes; the largest, near the apex, seemed of old date, was well defined, nearly large enough to hold a small hen's egg; its parietes lined by tenacious ash-coloured lymph. Lower down, and to the outside of this, were several smaller ones, more irregular in shape, and running into one another: some were completely formed; others only in progress, containing sloughs of the substance of the lung, nearly detached, and of a blackish-green colour. A few smaller cavities were found in the anterior inferior edge of lower lobe. The substance of the lung was, throughout its entire extent, much congested; of a blackish-green colour; more dense than the healthy tissue, yet softer than hepatized lung: in the neighbourhood of the larger cavity it was much denser than anywhere else, scarcely crepitating, but sinking in water when cut into very small pieces: around the smaller cavities it was very soft, giving way under the slightest pressure.

Left lung.—Traces of recent pleurisy in lower and outer part of upper lobe: corresponding to this, and immediately beneath

the pleura, was found a circular patch of an ash-grey colour (resembling an eschar made on the skin by potassa fusa). On cutting into this, it was found to consist of a slough of the tissue of the lung; it broke down on very slight pressure, leaving a cavity capable of containing a walnut, not communicating with any bronchial tube. The substance around this cavity was of a dark, reddish-brown colour, much congested, but crepitating, and scarcely altered in consistence from healthy structure (much like lung in the first stage of pneumonia, but more friable and softer). Another cavity, completely formed, was found on the inner and lower edge of the same lobe. The pulmonary tissue was everywhere of a dark, reddish-brown colour, much congested, more friable than in health, yet crepitating,—none of it sinking in water.

EPIDEMIOLOGICAL SOCIETY.

At a meeting of the Society, held Dec. 1st, 1851, at the House of the Royal Medical and Chirurgical Society, 53, Berners Street, Dr. BABINGTON in the chair,

Dr. MILROY read a paper on the circumstances connected with the rise and development of the Asiatic Cholera in the island of Jamaica.

After taking a brief retrospect of the course and duration of the pestilence in the New World upon its first visitation in 1832, and showing that it then exhibited a tendency to cling with greater tenacity to certain regions there than to any countries of Europe, the author gave an account of its progress in the United States, Canada, the Gulf of Mexico, and the Island of Cuba, in 1849 and 1850, until it appeared in Jamaica in the beginning of October of the latter year. It is a curious fact, that fourteen months previously several very suspicious cases occurred at Port Royal and Kingston, so that apprehensions were then entertained that cholera had fairly made its appearance in the island. At that time, Dr. Ferguson, the leading medical practitioner in Kingston, addressed a letter to the mayor on the necessity of taking immediate steps in the way of preparation against the impending outbreak. His remonstrances were unheeded, and nothing was done. During this year also, 1849, there was a peculiar disease, somewhat like to the potatoe blight, among some of the esculent roots of the island.

The weather in 1850, more especially after the month of May, was remarked in every part of Jamaica to be unusually wet, and extremely hot, with a close, stagnant

condition of the atmosphere, and a frequent absence, for days together, of the accustomed sea-breeze. There was also a low state of the barometer. Besides these atmospheric peculiarities, there was a very remarkable rise in the tides,—a circumstance which, taken in connection with the oppressive state of the weather, was believed to prognosticate the advent of a dreadful hurricane, or it might be of an earthquake; from both of which disasters Jamaica has suffered most severely upon several occasions. The medical men very generally anticipated a sickly autumn, the season being much like what it had been in some former years when malignant fevers prevailed epidemically.

On the 7th of October, the first case of cholera at Port Royal occurred in a woman, fifty years of age, living in a small, filthy house, near the beach. She had had an attack of bowel complaint a month or six weeks before, and had just recovered from it when she was seized. The case proved rapidly fatal, and was quickly followed by other cases in the same yard, and subsequently in every part of this most filthy and unwholesome sea-port town. In less than a month about one-third of the population were swept away.

It is worthy of notice, that ten days previously to the occurrence of the first case at Port Royal, a woman had died on the opposite side of the island, after an illness of about sixteen hours, with almost all the symptoms of malignant cholera. The exact nature of the case is uncertain, from the patient not having been seen by any medical man. No other cases occurred at the time, either among the woman's family, or in the neighbourhood. She had been nursing another woman affected with bowel complaint, and had been much exposed to the chill night air immediately previous to being attacked.

From Port Royal the pestilence rapidly extended to Kingston, about six or seven miles up the harbour, Spanish Town, and other parts of the island.

It is believed that at least 25,000 persons have perished out of a population of between 300,000 and 400,000.

Without entering upon any account of the disease in the island generally, Dr. Milroy upon the present occasion confined himself to giving a narrative of all the circumstances connected with the occurrence of the first case at Port Royal, with the view of determining whether there exist grounds for believing, as many have done, that the disease was traceable to importation of vessels from an infected port. He gave a summary of all the evidence upon the subject, and quoted the opinions of Deputy Inspector of Fleets, Dr. Johnstone;

Mr. Watson, Surgeon of the Royal Naval Hospital; and of Dr. Walshe, R.A., and Deputy Health Officer of the Port,—the only resident medical man upon the spot at the date of the occurrence; all of whom agreed that it could not be so traced. He expressed his own conviction, founded upon a careful examination on the spot, of the evidence on the case, coupled with a personal inspection of the locality where the disease first manifested itself, that this conclusion was just, and that to assert otherwise was to hazard a mere conjecture and groundless speculation. The paper was closed with one or two medico-geographical remarks.

By looking at a map of the New World, it will be observed that the only islands of the West Indies which have as yet been invaded by the cholera, Cuba and Jamaica are the two which are situated the furthest to the west, and the nearest to the shores of the Gulf of Mexico, many points on which have at different times been severely visited. In the first epidemic, Cuba, the most westerly of all the islands, was the only one which suffered. In the second epidemic, it was invaded long before the disease appeared in Jamaica, although there was pretty frequent unrestricted communication between them all the time. As yet, all the other West India islands have escaped. That this immunity has not been owing to non-communication with infected places, or to the adoption of any vigorous quarantine, is perfectly well known. Everything in the history of the epidemic seems to indicate that its migrations may occur independently of human intercourse, and in spite of any barrier which man has sought to oppose to them. It may be difficult to account for them, but much of the difficulty may arise from the want of accurate data to enable us to follow its course with exactitude. That there are currents and moving powers in the atmospheric ocean above and around us which we have hitherto failed to appreciate, is probable from many considerations; nor does it seem unreasonable to believe that by following the example of Colonel Read in working out his theory of storms,—viz., by collecting together a multitude of authentic facts as to the exact time and date of their outbreak at different places on the world's surface,—we may succeed in showing that the manifestations and course of those agencies which give rise to blights in the vegetable world, and to epidemic and epizootic diseases in the animal, are not so capricious and accidental as they now appear, and as we in our ignorance often assume them to be.

Mr. GRAINGER, Dr. JAMES BIRD, and Dr. SNOW, took part in the discussion.

The reading of Dr. Milroy's paper, and the discussion thereon, having occupied the time of the meeting, Mr. Cox's paper "On a Rational Mode of Treatment of Cholera," was deferred until the meeting in January.

SURGICAL SOCIETY OF PARIS.

Nov. 26, 1851.

Dilatation of the lymphatic vessels, and lymphorrhagia.

M. DEMARQUAY read an essay upon this subject. He had had occasion carefully to observe a youth, aged 17 years, affected with dilatation of the lymphatics, at the level of the union of the lower and middle third of the right thigh, with dilatation of the superficial net-work of lymphatics in the neighbourhood of the dilated trunk. This varix had burst on six different occasions, and M. Demarquay was enabled to collect a tolerable quantity of lymph: on the first of Nov. the escape of lymph continued for nine hours. This case had induced the author to search for other cases, and he finds in some authors mention made, not only of dilatation of the lymphatics, but also of the throacic duct, and chyloferous vessels; these cases, however, are not related with sufficient accuracy to give them sufficient value in a pathological point of view.

Tracheotomy in Croup.

M. GUERSANT related a case, which showed that croup occurring twice in the same child may a second time successfully undergo tracheotomy.

ACADEMY OF SCIENCES, PARIS.

Dec. 1, 1851.

On a peculiar acid secreted in the pulmonary parenchyma of most animals.

M. DUMAS presented a note in the name of M. Verdeil, on a crystallized acid, secreted in the lungs, and forming crystallized salts with the alkaline bases. It is found free, and combined with soda. It forms brilliant crystals strongly refracting light. At a high temperature it is destroyed with an empyreumatic smell, and a slight ash is left. It is soluble in water, insoluble in cold alcohol, dissolving in boiling alcohol, insoluble in ether. It is formed of carbon, nitrogen, hydrogen, sulphur, and oxygen, in definite proportions. This acid decomposes the carbonate of soda in the blood, and liberates the carbonic acid to be eliminated by the lungs.

On Sugar in the Urine.

M. REGNOSO communicated the second part of his researches, in which he showed that the presence of disease in the lungs is attended by the presence of sugar in the urine.

Hospital and Infirmary Reports.

ST. BARTHOLOMEW'S HOSPITAL.

(Reported by Mr. MILTON.)

Cases from Mr. LLOYD'S Practice.

Gun-shot Wound—Question of Amputation—Complete Recovery.

FORTUNATELY for the welfare of the human race, the advancement of science, and the spread of peace, the gun-shot wound of war is now seldom seen to what it formerly was; and fortunately for the reputation of those who forge, and the safety of those who use fire-arms, gun-shot wounds of any kind have now been for many years very uncommon in England.

But as injuries of this description have ever held a prominent place in the records of surgery, and as they are almost inevitably, by their very nature, of the most serious importance, we subjoin the following cases, in the hope that they will be in some degree interesting to the reader. The particulars we owe to the kindness of Mr. Hatfield.

A strong young man, a labourer, aged 19, but apparently, from his fully-developed frame, much older, was admitted into St. Bartholomew's Hospital, under Mr. Lloyd, for a gun-shot wound, which he had received in the following way:—

Five hours previous to admission into the hospital he was out shooting, when, wishing to cross into another field, he placed his gun in the hedge, and then stepping over it, drew his gun after him. It exploded, and lodged the whole of its contents in his left hand, with which he was at the time drawing it.

He distinctly states that this was accompanied by no pain, nor any sensation like a shock. He said, however, that he was shot, and taking the arm in the other hand, walked about, thinking he had only received some trifling injury, which would soon pass off. He now, however, began to lose a quantity of blood, and finding himself faint and sick, lay down, while a man who was near him ran for assistance. He was then conveyed to a surgeon's, who put some wet lint on the wound, and recom-

mended that he should be taken to the hospital, which was forthwith done.

At the time he received the discharge, the mouth of the gun, the wrist and arm, were almost on one line, but the forearm was somewhat bent upon the arm. The shot entered about an inch from the proximal border of the palm of the hand, and ploughed its way up to the elbow, where it escaped at the posterior surface of the joint. The skin was torn into strips, and, like the muscles, was doubtless, from the close vicinity of the explosive power, charred and blackened. No pulsation could be made out in the ulnar artery, but the radial seemed uninjured. There was no fracture of the bones of the forearm, but the shot had passed out so near to the elbow-joint, that it seemed difficult to believe the articulating surfaces could have escaped injury, even if some of the shot had not remained in contact with them.

The great question which arose was, whether amputation should be performed or not. It seemed doubtful as to whether the forearm would ever so far recover as to be a useful limb, and whether his constitution would hold out against the long-continued drain of suppuration which so extensively injured a surface seemed to threaten. Nevertheless, as his habits had been temperate, and his constitution was good; as only one artery of the forearm was injured; as the bones of the forearm were not shattered nor laid bare to any great extent; and as it was not certain that the elbow-joint was seriously implicated, it was determined to give him a chance of retaining his arm.

The result quite justified the trial. The wounds were lightly dressed, and a plain, light diet, with a little beef-tea, was allowed; his bowels were kept open, and the strictest rest enjoined. From time to time matter collected in the vicinity of the elbow-joint, and seven such abscesses required opening. Quinine and porter were employed, and as the drain was very abundant, wine was also added. These measures had the effect of keeping up his health, and, with the exception of some diarrhoea, which was speedily checked by the usual remedies, he progressed without any untoward symptom. At one time the arm ached excessively, and his nights were sometimes sleepless from this cause. To remedy this, an air cushion was placed under it with the happiest effects.

The wound is now all but cicatrised, and the patient seems likely to regain a considerable amount of power over it, with a tolerably free use of the joints.

On reviewing the circumstances which led to a decision so favourable to the patient's comfort and welfare, we see nothing

which would not have been sanctioned by the fathers of military surgery,—nothing which savoured of rashness. Had the case terminated unfavourably for the preservation of the patient's arm or life, it could then only have been classed among those unfortunate cases in which unforeseen complications and a bad constitution defeat resolutions taken on the faith of the principles laid down by those best acquainted with these subjects.

Thus Larrey saved the arm in a case where the shoulder had been struck with such violence that the end of the clavicle, the head of the humerus, the acromion, and coracoid, were broken off and shattered, and a great portion of the deltoid annihilated; but then here, as in Mr. Lloyd's case, there was no shattering of the bones, with destruction of the soft parts, *so as to compromise the integrity of a limb in its entire thickness*; a large surface of bone was not laid bare, nor was the supply of arterial blood or nervous power cut off from the limb by laceration of the channels of distribution.

One of the most alarming features in the case was the near proximity of the point of exit of the missile to the elbow-joint. Mr. Hennen says, in the arm many injuries of the head of the bone may be got over with due attention, while those at the elbow-joint most commonly lead to the loss of the limb: and Mr. Guthrie observes, much to the same effect, that wounds from musket balls entering the joint of the elbow, and fracturing only one of the bones, have seldom done well; and, again, that a musket ball passing through the elbow-joint, injuring the articulating ends of the humerus, radius, and ulna, is a fair case for amputation alone, and the joint cannot be saved by amputation.

The close vicinity of the mouth of the gun to the point upon which the discharge impinged, renders it probable that the shot did not scatter, but, on the contrary, took much the course, and some degree of the violence, of a musket ball arriving from a distance, so that the principles which would apply to the one might fairly be extended to the other.

Gun-shot Injury to the Side—Recovery.

The second case of this kind was that of a young man, aged twenty, admitted under very unfavourable circumstances into Coulson's Ward, having been struck by the loading of a gun, which was discharged within three feet of him.

The whole of the contents had entered his left side, between the third and fourth ribs, and not far from the sternum. On every act of expiration a stream of air and blood issued from the wound; the

blood was of a very florid colour. The breathing was hurried, noisy, and attended with great pain, and the action of the heart was exceedingly loud and tumultuous.

On examining the wound, it was found that the finger entered readily through the passage formed in the parietes of the chest, into a soft substance, the nature of which it was not very easy to decide upon, as, from the sensation it yielded, it might have been either lung or a mass of coagulated blood: the whole track of the wound was lined with shot.

The patient's sufferings were severe in the extreme; his constant cry being, "My pain is agonizing! You know I cannot live; give me something to put an end to me at once!" Instead of complying with his request, a large dose of tincture of opium was given him, which had the effect of inducing tranquil sleep, and in the morning he was better, and, comparatively speaking, easy.

From this time the wound progressed favourably, filling up so steadily and rapidly that in a few days air ceased to pass by it, but repeated attacks of pneumonia and pleuritis occasioned some anxiety for the ultimate termination of the case, and required free resort to the usual remedies for these affections. The sounds of the lung and heart, after these attacks subsided, gradually became natural, and the patient progressed steadily towards a more favourable state. Subsequently, however, he has had several inflammatory attacks, attended with cough, probably from the irritation occasioned by the passage of one or two of the shot into the bronchi, as, after the expulsion of these, the symptoms subsided. When last seen he had passed fourteen shots.

CASE III.—*Gun-shot Wound in a Child—Recovery.*

Of all persons, children may be considered least liable to injuries of this kind, and only great and most unwarrantable imprudence, as an accident of a very uncommon character, could expose them to injuries which they seem so little fitted to bear. The following case, however, will show that a gun-shot wound, even of a very severe kind, may be perfectly recovered from.

Owing to the very brief notes which were forwarded to us by the kindness of Mr. Lloyd, and our narrow limits as to space, we are compelled to restrict the history of the accident to the mere statement that the child, who was only about five years old, was admitted into Queen's Ward, under Mr. Lloyd, for a wound from a pistol loaded with ball. The patient had been struck in the lower part of the leg, and the different tissues were much bruised, and

their vitality seriously impaired, by the passage of the bullet, which was firmly imbedded in the parts. It was, however, extracted as soon as possible; simple dressing was employed, and in the course of a short time the child recovered, and left the hospital with a perfectly sound limb.

ST. THOMAS'S HOSPITAL.

(Reported by Mr. MILTON.)

Cases from Mr. SIMON'S Practice.

Stricture—New Operation.

WHEN once spasmodic stricture has supervened upon the organic form, the case admits of no further delay, and accordingly we find that the most able surgeons have taken especial pains to inculcate the necessity of immediately resorting to some steps for withdrawing the urine.

But though there has generally been little doubt as to what we are to do when the catheter can be passed, yet the greatest disunion has long prevailed as to what plan is to be adopted when the instrument can be made to penetrate the stricture.

One of the most unobjectionable of these has been considered to be the piercing of the bladder through the rectum with a trocar, and yet we find it strongly condemned as dangerous and unjustifiable. Mr. Guthrie says, "the peritoneum, instead of passing down behind the bladder, and between it and the rectum to the base of the triangular space, and then terminating in a cul-de-sac, does sometimes pass on further between the triangular space and the rectum, and even occasionally as far forwards as the prostate gland; so that, by puncturing through the rectum, the general cavity of the peritoneum will be opened in such cases before the bladder is reached, and the patient must be lost."—*Lancet*, 1851, p. 478.

Nor has the operation above the pubes been less condemned. Mr. Guthrie considers this also altogether objectionable; and to quote authorities who have raised their voices against it would only be to fill the pages of the journal with subject-matter which the reader will find in every standard work on surgery.

We have several times seen puncture of the rectum with the happiest results, and never seen it fatal or even injurious. The operation above the pubes has been abandoned and resuscitated, till it is difficult to say in what degree of favour it now stands, while that of passing down the catheter to the stricture, dividing this, taking up the urethra again like a lost thread, and pass-

ing the catheter on to the bladder, is undoubtedly difficult, sometimes impracticable, and occasionally fatal.

Mr. Syme's operation has undoubtedly succeeded in cases, but then it is adopted, and seems to be only intended, for the radical cure of organic, not the instantaneous relief of spasmodic stricture, since a *sine quâ non* of its success is, that first of all a curved director should be passed through the stricture, so that the patient would most probably die while the surgeon was taking means to cure radically "the unyielding disposition manifested by the constricted canal, and its tendency to contract perhaps even more closely than before after being partially or completely dilated." Moreover, the hæmorrhage which follows it is often alarming, and has in some instances been all but fatal.

Hence any plan tending to relieve the sufferings of the patient, and render the removal of accumulated urine more easy and safe, as well as less dangerous, will doubtless be welcomed by surgeons as a valuable addition to our resources against this malady. Mr. Simon has in several instances performed a very simple and effectual operation for stricture, which has the additional advantage of being equally adapted to cases of simple permanent stricture and those complicated with retention. Mr. Simon passes the finger of the left hand into the rectum, and feels for the prostate gland: so soon as he has well made out the position of this, he plunges a narrow bistoury into the raphe, about an inch anterior to the rectum, and carries the point of it towards the tip of the finger; the back of the knife is turned towards the finger, and thus the urethra is at once reached, posterior to the stricture. This immediately relieves the retention, and he then allows the stricture time to dilate a little, which it does when the pressure is taken off from behind, and then it can be dilated by the bougie, &c. Mr. Simon has performed this operation in several cases with success. The first case of all was that of a man who was sinking rapidly, the bladder distending, the tongue growing brown, and typhoid, great anxiety, &c., and who would have died before the ordinary operation of cutting down upon the stricture could have been executed. It was accomplished in a very short time, and was quite successful.

In the following cases, which we give somewhat in full, it will be seen that the stricture was far advanced, but was unaccompanied by spasm. For the notes we are indebted to the kindness of Mr. Tyrrell, of St. Thomas's.

CASE I.—H. L., aged 34, a hawker, was admitted into Lazarus Ward, October the

14th, 1851, with stricture and perineal abscess, of which he gave the following account:—He had been accustomed to live somewhat freely, but was not in the habit of drinking to excess. He has suffered under stricture for six years, and two years ago had an abscess in one of his testicles,—the result, perhaps, of the stricture. On his admission, he appeared to be in a very weak state: there was an abscess in the perineum, which, according to his statement, had only existed for a week. Distinct fluctuation was made out. The stricture scarcely admitted the smallest catheter, which was passed the next day into the bladder; and the abscess in the perineum was opened, giving exit to a quantity of very fetid pus. The patient was sent to bed; four ounces of gin were also ordered him, and the opening into the abscess was dressed with linseed meal poultices.

On the 16th, or the second day after admission, he complained of the smarting, and occasionally the urine getting upon the wounded surfaces; he was weak, and had passed a sleepless night. Urine flowed also by the urethra. At half-past 12 on the same day he was seen by Mr. Simon; and, as there was a good deal of urine extravasated, and a considerable quantity was passed through the catheter when this was introduced, the surgeon decided upon puncturing the canal. This was done in the way we have described, and the urethra was reached with great ease: a firm elastic catheter was then passed into the bladder.

During the two succeeding days it was clear that the patient's state became very critical. His pulse was quick and weak; he was feverish and ill, and the urine contained a great deal of pus; but the swelling in the perineum steadily subsided, the pulse gradually rose, the patient began to sleep better, and the urine lost its purulent character.

On the 20th of October, it is stated in the report that "the swelling has now almost disappeared; his urine has much improved in every respect; it is clearer and less offensive." As he complained of his bowels not being open since the 17th, half an ounce of castor oil was ordered; and the dressing with warm water, which, for the last two or three days, had been substituted for linseed poultices, was continued.

Three days after, he noticed that there was a discharge from the urethra, and he still complained of being weak and having no appetite, but he was evidently getting stronger, and the abscess was rapidly disappearing. On the 27th, the catheter was withdrawn from the bladder: it was very much coated with phosphates. A small

catheter was now passed by the penis into the bladder, and kept there for some little time.

The dilatation of the stricture was now commenced, and a succession of bougies was passed with the happiest results. By Nov. 5th, considerable ground had been gained, and very little urine passed by the wound, and in the course of a very short time he went out of the hospital completely cured.

CASE II.—J. G., aged 35, a coal-heaver, was admitted Oct. 17th, 1851, into Abraham Ward, with symptoms of extravasation of urine, respecting which the following history was obtained:—He had laboured under stricture for seven years past, but no retention had occurred until about nine weeks previously, when suddenly finding he was unable to pass any urine, he applied at the hospital and was admitted. On the nature of the case being made known, an attempt was made to pass a catheter, which, however, failed. A dose of opium was then given him, and he was sent to bed, which had the effect of relieving the retention, and procuring a flow of urine. He went out again, and four days previous to his re-admission noticed the swelling in the perineum. For long the stricture has been extremely tight, admitting the escape of only a very narrow stream, and his habits being intemperate, had doubtless fostered a tendency to spasmodic stricture.

At noon Mr. Simon saw him, and performed the operation without any delay. To relieve the accumulated pus and urine, an opening had to be made into a collection of matter situated posterior to the scrotum, and another into the cellular tissue on the pubes: the latter yielded little result, but the former was followed by the escape of a quantity of pus. He was then ordered a pint of porter.

On the day after, it was found that he had slept well, and that his appetite was good, but the pulse was rather full and quick, and he had several violent fits of shivering, which, however, disappeared by the next day. His appetite remained good, but, as in the other case, the bowels were constipated, and had to be relieved by appropriate remedies.

He now began to mend steadily, and though he complained of being weak and low, his pulse and appetite remained good, his urine improved in colour, the discharge of pus diminished, and the swelling subsided. On the 23rd of October, the catheter was changed, as it was much coated with the urinary salts; and on the 29th it was removed altogether, and one passed into the bladder by the penis. By this

time the pulse and strength had steadily improved, his tongue had grown clean, his bowels were regularly open, and the urine was of average character. On the 1st of November the dilatation by bougies was begun, and continued regularly up to the date of Mr. Tyrrell's last communication to me on the subject, (Nov. 21st,) when the man was just cured and about to leave the hospital.

CLINIQUE DES DÉPARTEMENTS.

Large Pulmo-axillary Abscess.—Cure.

Under the care of Dr. CARVILLE, Physician to the Maison Centrale de Gaillon.

M——, forty-five years of age, of a nervous temperament, of a somewhat enfeebled constitution, and of a moderate stature. He was born of healthy parents, and had never been exposed to want or privation. He had been twice condemned to labour in the public works, and had left the prison at Toulon, after eighteen years' detention, with his health and vigour unimpaired. Having been sent to the *Maison Centrale* of Gaillon, he had been put to light work calculated not to injure his health. In 1849, he had been employed in cleansing copper from verdigris, by means of nitric acid. From this time his health failed; he became emaciated; he complained of uneasiness in his chest, and of the cough excited by the fumes of the nitric acid. These, with the copper, produced a degree of poisoning which were manifested by cramps and contractions of the limbs, with sense of oppression: for these he was admitted into the infirmary in January 1850, where he remained six months, when he left perfectly recovered. Since that period he has been frequently admitted for the same ailments, which have each time readily disappeared under treatment.

He was again admitted into the infirmary on the 23rd April, 1851; nothing, however, attracted particular attention to the state of the chest until the 10th of May, when the rapidity of his breathing, and a degree of fever, directed the notice of Dr. Carville to his chest. The patient, when closely questioned, replied that he had cough; that he was oppressed at the chest; that it was equally difficult to lie on one side as on the other; he expectorated a white mucous sputum, without trace of blood. The whole left side of the thorax was dull to percussion both before and behind, the respiratory murmur was less clear here; along the vertebral column a small crepitant râle could be heard. On the right side respiration was puerile.

In the midst of these symptoms, which indicated tubercular disease proceeding slowly throughout the left lung, a tumour appeared in the left axilla the size of a hen's egg, soft and fluctuating. As the patient referred the date of this to two or three days before, and as it was not painful to the touch, it was regarded as the suppurative process of a long-standing glandular engorgement. On the following day, however, the tumour was twice as large, and on the next day had extended beneath the great pectoral muscle. By making pressure upon it, its contents could be expelled. The idea then occurred that this was a pulmonary abscess escaping externally. The gravity of the case, the nature of the prognosis, and the difficulty of treatment, became evident.

To open this tumour was to expose a vast cavity, comprising the axilla and the entire subpectoral space, to the action of the air. This cavity extended also directly into the thorax, and the sudden access of air might produce asphyxia and death, if the cavity should be external to the lungs in the pleura. These considerations, and the favourable condition of the patient, induced Dr. Carville to wait the course of events. On the 18th, the patient suddenly experienced a sense of oppression, a tickling sensation in the throat, with abundant and incessant expectoration of purulent sputa, amounting in the course of one day to at least a pint; the axillary tumour meanwhile subsiding, and in the course of an hour having entirely disappeared. The aspect of the patient's countenance became cadaveric.

19th. The patient is obliged to keep the sitting posture in bed, any other attitude being impossible; the expression of the face altered, and covered with a cold clammy perspiration; the skin generally moist; the pulse 75, and feeble; occasional slight rigors. The two sides of the chest were alike, with the exception of slight effusion beneath the pectoral muscle. Both sides of the chest were equally raised in inspiration. Great sense of oppression. Respirations thirty in the minute. The healthy side, in front, was resonant on percussion, the respiratory sound puerile. On the diseased side there was dulness, rhoncus, a little gurgling, slight prolongation of the voice without pectoriloquy. The healthy side, behind, gave only the normal sounds, exaggerated. On the diseased side there was a general dulness, with obscurity of the respiratory murmur, which was replaced by a moist râle with large bullæ.

The axillary tumour, depressed, soft, and easily compressed, became distended and tense during coughing, and at its centre permitted the finger to penetrate an intercostal space: this pressure excited cough

with puriform expectoration: the pus of the external abscess was pressed into the lung, which thus relieved itself. These symptoms, together with some emphysema in the cellular tissue about the axilla, indicated a free communication between the sac of the abscess and the substance of the lung.

21st.—Little or no alteration in the local or general signs. A clear and distinct metallic tinkling audible, without amphoric breathing.

22nd.—The patient seemed sensibly improved, his face was no longer cadaveric, the clammy perspiration had disappeared; the pulse was fuller and slower; respiration not so hurried; complains less of oppression. The axillary tumour was reduced to the size of an egg; the finger could be pressed into the intercostal space, but without exciting cough or expectoration as before. The sensibility of the surface was so acute that it was impossible to determine the degree of dulness; respiration was free in the front of the affected side, and accompanied by a hoarse ronchus, which was attributed to the passage of air through the opening into the sac. The same symptoms were present at the back of the chest, except that the metallic tinkling was absent, which could not afterwards be detected.

25th.—The hoarse ronchus had disappeared, and was replaced by large crepitation. The sensibility of the surface having diminished, some degree of dulness was still observed, as well as of vocal resonance. The right side of the chest was healthy; the general health much improved.

The improvement continued: the patient was able to lie on either side; the appetite increased; the expectoration decreased, and had become mucous and lost its purulent character: his constitutional strength augmented rapidly from day to day. By the 2nd July, he was discharged cured.

No trace of disease could be discovered in the chest. His general appearance was quite that of health, and his strength being perfectly restored, he returned to labour at the end of another month.

Dr. Carville states that he has unsuccessfully searched for a parallel case to this now related. On the 10th May, when the patient was carefully examined, nothing could be detected but a slowly proceeding tubercular disease, in the ordinary form of phthisis. The occurrence of the communication between the abscess and the lung did not exclude the idea of phthisis, as it might be connected with softening of the tubercle.

Having escaped from such an occurrence in so wonderful a manner, could the abscess be said to be the result of inflammation caused by the irritation of the vapours of ni-

tric acid, or was it to be attributed to a circumscribed tubercular inflammation? Whatever may be its cause, it is regarded by Dr. Carville as one of the most curious cases on record.

Medical Intelligence.

THE INFLUENCE OF THE CLIMATE OF NEW ZEALAND, IN RELATION TO THE PRODUCTION AND PREVENTION OF DISEASE.

WE present an abstract of a very able and interesting report, drawn up by Dr. A. S. Thomson, Surgeon of the 58th Regt., and submitted by him to the Governor of the Colony. The observations upon which it was founded are drawn from the troops serving in the Northern Island, extending over a period of two years, viz., from the 1st April, 1848, to the 31st of March, 1850, the men having all been more than a year in the island, and not exposed to field service.

The mean temperature of the north island is higher, and the range of the thermometer is lower than in England. The climate is, however, more humid; thus, the average number of inches of rain falling in London annually is twenty-four, in Wellington, New Zealand, forty-six inches, but the number of rainy days is greater in London. The climate of the Bay of Islands, at the northern extremity of the island, resembles that of Madeira.

The mortality of the troops (excluding officers, women, and children), was 10 per 1000, in 1849; in 1850, it was $8\frac{1}{2}$ per 1000; giving an average of $8\frac{3}{4}$ per 1000. The mean annual mortality of soldiers stationed in England is 14 per 1000. The admissions into the hospitals per 1000 from several diseases was as follows, with their comparative admissions into the hospitals in England:—

| | New Zealand. | Great Britain. |
|--|--------------|----------------|
| Fevers | 13 | 75 |
| Diseases of the lungs . . . | 51 | 143 |
| Diseases of the stomach and bowels | 60 | 94 |
| Rheumatism | 41 | 50 |
| Diseases of the eyes . . . | 48 | 19 |
| Diseases of the skin . . . | 6 | 29 |

The mortality from fever in New Zealand has been 0.3 per 1000; in Great Britain it is 1.4 per 1000 among the troops. The form of fever in New Zealand is mild. In the autumnal months, bilious fevers of a few days' duration are incurred by errors in diet. Ague is almost entirely unknown among the natives. Scarlatina prevailed in Auckland in 1848, and proved fatal to eighteen persons. Small-pox and measles are still unknown in the country. The

lower mortality from diseases of the lungs is very striking, especially when it is borne in mind that on examination into the histories of the cases, it was found that in many the disease had begun before the patients left England, while life was undoubtedly prolonged by the residence in New Zealand, as the climate presents a remarkable immunity from consumptive disease. The climate appears to create a tendency to ophthalmia.

Not only do disease and death occur less frequently in New Zealand than in England, but it would seem that life is prolonged; the mortality under five years of age is very low indeed. The island has been found to have great advantages as an invalid station for troops from India, the Cape, and other colonies.

OBITUARY.

DEATH OF DR. FRAMPTON.

DR. ALGERNON FRAMPTON, whose death we recorded in the LONDON MEDICAL GAZETTE for December 12, 1851, was the second son of Dr. Algernon Frampton, who died about nine years ago.

He was born in 1803, and was, therefore, at the time of his decease, in his 49th year. Having received his classical education at Harrow, under the Rev. George Butler, D.D. (now Dean of Peterborough), he entered at St. John's College, Cambridge, in 1821, and four years afterwards took his degree of B.A., and obtained the twelfth place among the wranglers.

In 1825 he commenced his medical studies at the London Hospital, of which establishment his father was one of the physicians; and having taken his degree of M.B., he, in 1832, was admitted a Licentiate of the College of Physicians, and, in 1835, a year after he had obtained the degree of M.D., was made a Fellow. He delivered one of the annual courses of lectures before the College, and subsequently served the office of Censor for two years.

He was for seven years Physician to the London Dispensary, and for nineteen years was connected with the London Hospital as one of its medical officers,—first as Assistant Physician, afterwards as Physician. During a portion of this period he lectured on Toxicology, in the Medical School of that institution.

He died, after many months of suffering, of morbus cordis (valvular disease, and hypertrophy), complicated with purpura and enlarged spleen.

Dr. Frampton was a man of considerable intellectual power, but which was rendered somewhat less conspicuous by his remarkable diffidence. He was strictly honourable, conscientious, and upright in all his dealings. He was totally devoid of selfishness, ever

thoughtful and considerate for others, and was remarkable for his kind-heartedness and benevolence. These qualities endeared him to his family circle, and commanded the respect and esteem of all who knew him.

He published three papers in this journal. One "*On a New Test for Corrosive Sublimate*" (June 9th, 1843); a second consisting of further observations on the same subject (October 13, 1843); and the third "*On a very ready and easy manner of estimating the quantity of solid matter held in solution in any given quantity of urine of a given specific gravity (at 60° F.)*"

He had previously published a small pamphlet, entitled "*An Account of the Mutual Assurance Society.*"

In 1847 he published, in the *Pharmaceutical Journal*, a "*Report of Experiments made to ascertain the action of a poisonous Leguminous Plant from Swan River, New South Wales.*"

For the last three years he had been engaged in editing a new edition of Thomas's Practice of Physic. We believe that nearly 600 pages of this work are already printed, and that a considerable portion of the remainder is ready for the press.

NEW VIEWS ON THE SUBJECT OF PYROMANIA.

MORE than 25 years ago, the Austrian Government, influenced by medical reports, admitted a then current theory respecting the cause of one class of crime, and modified the practice of the Criminal Court with regard to them. There had been several cases of arson (*Brandstiftung*) committed by very young persons, and medical men attributed it to a peculiar "organization" in the criminals, that drove them by an irresistible impulse to fire-raising: thrusting a lucifer into the dry thatch of a barn was, in fact, merely the symptom of a human malady, to which they gave the name of "Pyromania," or, in German, the more formidable title of "*Brandstiftungsstrieb.*" Yielding to this medical theory, the Government ordered that in all such cases the criminals should be subjected to a professional examination to ascertain whether they were afflicted with this really dangerous and, in its effect at least, most catching disease, or whether they were responsible for their act by the possession of so much of the shepherd's philosophy as taught him that "the property of fire is to burn." Since that period (1824) the medical profession has, on further investigation, itself condemned and renounced the theory, and determined that the plea of "irresistible impulse" and a peculiar "organization" against a charge of wilful fire-raising is not a sound one; the Government, therefore, has also revoked the legal practice founded on the erroneous theory,

but with its customary maturity of deliberation. A medical report, dated in October last, states that the medical profession has for many years been convinced that the doctrine in fashion a generation ago was a false one. The decree releasing the Criminal Court from the obligation of handing over all youthful incendiaries to the doctors is only of the 30th of November. In future, the Court is to use its discretion, and order such an investigation only when there are grounds for it, as it does with other criminals. The eminent medical men who have signed the report on which the present decree is founded, request to be relieved from the duty of examining all persons charged with this crime, and pronouncing a decision on their responsibility, which only had the effect of delaying the prosecution, the doctrine on which they were authorized to act having long been exploded; they assert confidently, that the efficacy of the law will not thereby suffer the least injury.

BIRTHS & DEATHS IN THE METROPOLIS During the Week ending Saturday, Dec. 13.

| BIRTHS. | | DEATHS. | |
|---|-----|------------|-----|
| Males.... | 802 | Males.... | 589 |
| Females.. | 735 | Females.. | 605 |
| <hr/> 1537 | | <hr/> 1194 | |
| CAUSES OF DEATH. | | | |
| ALL CAUSES | | 1194 | |
| SPECIFIED CAUSES | | 1190 | |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | | 243 | |
| <i>Sporadic Diseases, viz.—</i> | | | |
| 1. Dropsy, Cancer, &c. | | 36 | |
| 2. Brain, Spinal Marrow, Nerves, and Senses | | 125 | |
| 4. Heart and Bloodvessels..... | | 41 | |
| 5. Lungs and organs of Respiration | | 284 | |
| 6. Stomach, Liver, &c. | | 66 | |
| 7. Diseases of the Kidneys, &c. | | 15 | |
| 8. Childbirth, Diseases of Uterus, &c. | | 8 | |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | | 8 | |
| 10. Skin..... | | 1 | |
| 11. Premature Birth..... | | 41 | |
| 12. Old Age | | 51 | |
| 13. Sudden Deaths..... | | 7 | |
| 14. Violence, Privation, Cold, &c.... | | 51 | |

The following is a selection of the numbers of Deaths from the most important special causes:

| | | | |
|--------------------|----|------------------|-----|
| Small-pox..... | 37 | Convulsions..... | 46 |
| Measles..... | 16 | Bronchitis | 136 |
| Scarlatina | 34 | Pneumonia | 105 |
| Hooping-cough | 24 | Phthisis | 142 |
| Diarrhoea..... | 21 | Lungs | 30 |
| Cholera..... | 2 | Teething | 8 |
| Typhus..... | 62 | Stomach | 6 |
| Dropsy | 12 | Liver | 12 |
| Hydrocephalus | 35 | Childbirth | 3 |
| Apoplexy | 21 | Uterus | 3 |
| Paralysis | 30 | | |

REMARKS.—The total number of deaths was 25 above the average mortality of the 50th week of ten previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 30.14
 " " " Thermometer^a 39.8
 Self-registering do.^b Max. 58° Min. 26°
^a From 12 observations daily. ^b Sun.
 RAIN, in inches, 0.0. — Sum of the daily observations taken at 9 o'clock.

Lectures.

CLINICAL LECTURE
ON THE
CATARRHAL AND LOBULAR
PNEUMONIA IN INFANTS.

BY M. TROUSSEAU,

Professor in the Faculty of Medicine, Paris; and
Physician to the Hôpital des Enfants.

THE eminent physicians who have written upon acute diseases of the chest in children, have clearly pointed out the symptoms, the lesions, and the relative gravity of the inflammations known under the names of lobular pneumonia, capillary catarrh, catarrhal pneumonia, pneumonic catarrh, and simple acute pneumonia. As, however, these accurate notions are scattered throughout voluminous treatises, or contained in detached and little known essays, the generality of practitioners entertain erroneous notions of the diseases of which we have spoken.

Catarrhal, and true pneumonia (*la pneumonie franche*), are in truth as distinct one from the other, as are variola and erythema. We may adduce proof of this from the difference in their mortality. Of twenty children admitted during six months, suffering under acute true pneumonia, not one had died; whilst of thirty children attacked with catarrhal pneumonia, not one had survived. Such diversity in the demonstrated results places these two diseases at an immeasurable distance from each other.

We may state, in order to give this parallel a more striking character, that in true pneumonia the symptoms exhibit an excessive activity and acuteness, and then suddenly subside. On the contrary, a certain proportion of cases of catarrhal pneumonia, however mild they may appear at the outset, rapidly assume an uncontrollable severity.

We have elsewhere, and that frequently, traced the groups of symptoms which characterize these two forms of disease; nevertheless we again present a summary thereof.

True pneumonia scarcely ever attacks an infant under two years of age; very rarely does it occur to those between two and three years of age—and it is met with more frequently as the child approaches youth. It has the same characters, signs, and symptoms, as those of acute pneumonia in the adult, as we shall show. After

twenty-four or thirty-six hours' existence, the signs of the disease are but little heard, above the breathing sound and bronchophony, except by a crepitant râle, which in the adult is most frequently audible during the act of coughing; while the tubular breathing is heard over a considerable extent, the crepitant râle is seldom heard, in infants. There remains in these cases, from day to day, when the tubular sound has disappeared, merely a feeble respiratory murmur.

The course of the disease is also much more rapid, at least in children between three and eight years of age, after which period pneumonia differs less and less from that of the adult. The result proves that this is not a very fatal disease; however unskilful the physician may be, he will cure the greater part of his cases, if the attack be slight; however skilful he may be, he will lose an uncertain number when the disease is of a severe character. Children are often brought to the hospital in the fourth, fifth, or sixth days of the disease, and convalescence commences almost immediately. It cannot be supposed that the medical means (sufficiently trifling very often) employed, could have had a notable influence upon the disease. Those who are admitted at the onset of the disease are so speedily cured that we are often disposed to attribute to remedies effects which depend upon the natural mildness of a disease, which, under other circumstances, is attended with a formidable array of symptoms.

We ordinarily perform a venesection from the arm to the amount of from sixty to a hundred and twenty grammes (= 15 to 30 drachms, Eng.); we excite vomiting by a mixture containing from thirty to forty centigrammes (= from 4 to 6 gr. Eng.) of sulphate of copper in fifty grammes (= about 1½ oz. Eng.) of some simple fluid. Thus, medicine is given once or twice a day during the most acute period of the disease. We then administer a linetus containing from ten to fifteen centigrammes (= about one or two grains, Eng.) of Kermet (sulphuret of antimony), and the same quantity of extract of digitalis (?). These remedies are discontinued as soon as the pneumonic respiration disappears.

Catarrhal pneumonia does not manifest itself under the same aspect. It begins with catarrh which rapidly extends to the small bronchi, invading in detached parts both lungs, especially behind; the crepitant râles are numerous and fine. These stethoscopic signs are observed for four, six, eight, or fifteen days, without the respiratory murmur being audible. Sooner or later, however, the murmur is heard, when either the cry or the voice is restrained, or

at least the breathing sounds are prolonged. While the signs which are common to catarrhal and to pure pneumonia are manifested in one part, the persistence of catarrhal pneumonia in another portion of the lung may be known by the persistence of the sub-crepitant râle. It seems evident that the disease which had commenced in the mucous membrane has extended to the parenchyma of the lung. Although the febrile symptoms are less violent than in true pneumonia, they manifest considerable severity at certain hours in the day, subsiding almost entirely at other times; presenting the changes from better to worse, alternately elevating and depressing hope, and this state lasting for fifteen, twenty, or thirty days. Thus it exhibits the obstinate and uncertain features of catarrh. The points of lesion become multiplied as the disease spreads to different parts; the fever acquires greater severity, the embarrassment of breathing is augmented, and the poor little sufferers sink exhausted, whilst some die more rapidly when the disease has greater severity from the outset, and the lungs have been quickly invaded over a large extent; bleeding, revulsives, antimonials, emetics, belladonna, squills, digitalis, polygala, having been tried without benefit.

The disease has generally a speedily fatal termination when it follows upon measles, to an affection of the skin, or to acute laryngitis.

These two diseases may *exceptis exceptiendis* be compared in some of their features to the resemblances between erysipelas and phlegmon: erysipelas, like catarrh, passing over the surface, and when it has continued some time, producing ulcerations of the skin, boils, and abscesses, in the same manner that capillary catarrh produces purulent deposits in the structure of the lungs; while pure pneumonia proceeds rather in the manner of simple phlegmon, severe in its inflammatory accompaniments, but terminating quickly and entirely.

An apology may appear necessary for having occupied your attention with so ordinary a topic as that of infantile pneumonia, but more than one physician who has only studied diseases of the chest in hospitals for adults, will, perhaps, find in what has now been said, the explanation of facts which have perplexed him. He will understand why the severity of pneumonia differs so widely in children, and, when he shall be able to distinguish catarrhal from true pneumonia, he will be enabled to give a more confident prognosis.

We do not, however, wish it to be supposed that we consider catarrhal pneu-

monia as invariably fatal. If it be so, in hospitals, where impure air exerts a prejudicial influence, it is not the case in private practice. Here the beneficial effects of frequently repeated emetics, of vesicatories, of antimonials, digitalis, &c., cure at least half of the cases, but at the same time a large proportion prove fatal; for the mortality of that disease is certainly fearfully great, in which one-half the cases end fatally.

Original Communications.

ON NARCOTISM

BY THE

INHALATION OF VAPOURS.

BY JOHN SNOW, M.D.

[Concluded from p. 1057].

PART XVIII.

Antiseptic power of narcotics—Narcotic vapours and gases prevent ordinary combustion—They prevent the slow combustion of hydrogen by means of spongy platinum—They prevent the oxidation of phosphorus—Nature of the power by which narcotics prevent oxidation in the living body and out of it—Recapitulation.

DURING the last two years, whilst the investigations which I have been making respecting chloroform and ether, and publishing from time to time in the MEDICAL GAZETTE, have been directed more particularly to showing the *modus operandi* of these agents, M. Robin, of Paris, has been engaged in a like inquiry, and has arrived at similar conclusions, although his researches have been made in a different manner. His opinion was given at the Academy of Sciences to the following effect:—That the anæsthetic action of the vapour of ether or chloroform is the result of a state of asphyxia more or less complete; but that this kind of asphyxia is produced by these agents, when absorbed, protecting the blood in the capillary vessels against the action of the oxygen, in the same way that they protect a piece of flesh, or any other animal substance that is plunged into them, against the action of the same agent, oxygen, and thus prevent putrefaction.*

* See Comptes Rendus, t. xxx. p. 52.

M. Robin subsequently gave his views to the Academy in a more extended form. He stated that all substances which will preserve dead animal and vegetable matters against putrefaction are capable of acting as poisons to all organised beings, whether possessed of a nervous system or not; that the action is independent of their coagulating or not coagulating albumen; and that it consists in the power they have of protecting organised matters from slow combustion by moist oxygen. He stated that they diminish or completely interrupt the combustion according to the quantity; and that, in proportion to the dose, they are sedative medicines to animals, and asphyxiating poisons to all organised beings.*

The following are amongst the substances enumerated by M. Robin as having the properties in question:—Sulphuric ether, chloroform, benzin, Dutch liquid, hydriodic ether, acetic ether, naphtha, sulphuret of carbon, camphor, protochloride of carbon, carburet of nitrogen, hydrocyanic acid, and arsenic. The first seven of the above agents are amongst those whose narcotic effects I have described in the *MEDICAL GAZETTE*.

The antiseptic power of these and other substances is probably in direct proportion to their narcotic strength; at all events, I have ascertained that such is the case as regards chloroform, ether, and alcohol. A few drops of chloroform, when put into a bottle, form enough vapour to prevent putrefaction in a piece of flesh suspended in it; but it requires a larger quantity of ether, which is a less powerful narcotic, to produce a like effect. One part of ether, when mixed with nine or ten parts of water, preserves animal matters; but a larger proportion of alcohol is required for a like effect; and alcohol, as is well known, requires to be taken in much larger quantity than ether to cause insensibility. I have often observed the antiseptic powers of chloroform, even in the small quantity which suffices to cause the death of an animal, especially when it has been inhaled slowly, so that the tissues were intimately impregnated with it. For instance, the cat which formed the subject of Experiment 73 in a former paper,

and which was killed with chloroform, was kept for sixteen days in a temperature between 50° and 60° Fahr., and, at the end of that time, the rigor mortis was only beginning to subside, and putrefaction had scarcely commenced.*

The substances which have the property of limiting and preventing oxidation in the living body, have also the property of limiting and preventing that kind of oxidation which constitutes ordinary combustion. If, for instance, as much ether as will make not less than about eight cubic inches of vapour be diffused through the air of a bottle or jar holding one hundred cubic inches, and a lighted taper be lowered into the vessel, it will be extinguished. The vapour of ether will take fire at the mouth of the bottle; but the taper will go out as it descends into the air mixed with vapour not in a state of combustion. Flame is extinguished also by the vapour of chloroform when in sufficient quantity, and by many other vapours and gases. Sir Humphry Davy, whose investigations on flame resulted in the discovery of the safety-lamp, thought at first that the power of preventing combustion in these instances depended on the cooling power of the gas employed as a diluent; but, on making experiments with various gases, he found that some other cause or causes existed. Olefiant gas had a much greater effect in preventing the

* I am persuaded that the antiseptic properties of various substances are capable of producing greater advantages than they have hitherto, especially if applied by the method of injecting the arteries immediately after death, which was described in my last paper. Owing to the difficulty of curing meat by the ordinary methods in tropical climates, thousands of oxen and sheep are slaughtered in South America and Australia, for the tallow and hides, whilst the flesh is left to rot; when, by injecting the vessels, it could be immediately rendered as firm as in the coldest climate: There would probably be a prejudice against using a medicine such as chloroform for this purpose; but it fortunately happens that the essential oils, which exist in nearly all condiments, are both narcotic and antiseptic. I have frequently made insects insensible by exposing them in a covered vessel to the vapour of oil of peppermint; and, on one occasion, I rendered a linnet insensible by the inhalation of the vapour of oil of lemons: by injecting twenty minims only of the latter essential oil (shaken up with an ounce of water) into the arteries of a rabbit after death, it kept very well for seventeen days. I have found that injecting with a saturated solution of common salt very much hastens rigidity, although it does not produce it immediately. I hope that some one who has the opportunity will follow up this subject, as it promises to yield a kind of wealth more useful than the newly-discovered treasures of California and Australia.

* *Comptes Rendus*, t. xxxi. p. 383; and *MED. GAZ.* vol. xlyi. p. 590.

explosion of oxygen and hydrogen by the electric spark than any of the other gases employed by Sir H. Davy, and this gas is a more powerful narcotic than carbonic acid, or any of the others he used, except sulphuretted hydrogen (which probably acts in a different manner from ordinary narcotics), for I have found that olefiant gas causes immediate insensibility in birds, when mixed with the air in the proportion of one part to ten.

Dr. Henry, and Professor Graham,* have ascertained that a number of gases have the effect of preventing the slow combination which takes place between oxygen and hydrogen with the aid of spongy platinum, and that the relative power of the various gases is nearly the same in this instance as when the electric spark is employed, olefiant gas being the most powerful.

Professor Graham discovered† that a number of vapours, as well as gases, have the property, when mixed with atmospheric air, of preventing the slow oxidation of phosphorus, which renders it luminous in the dark. He found that olefiant gas, and the vapour of oil of turpentine, and of other essential oils, possess this power, even when present in a very minute quantity. I expressed an opinion nearly five years ago,‡ that the action of ether on the human frame was of the same kind as that by which it prevented the oxidation of phosphorus; and this view is supported by the fact, that amongst substances of a similar constitution, whose narcotic power is known, this power bears a direct relation to the power of preventing the oxidation of phosphorus. For example, I find that the vapour of alcohol has but little influence in this respect, whilst Prof. Graham found that the vapour of ether, in the proportion of one part to 150 of air, prevents the oxidation of phosphorus at all temperatures up to 64° Faht.; that one part of olefiant gas (which is a more powerful narcotic) has a like effect in 450 parts of air; and that one part of vapour of naphtha exerts this influence when diluted with 1820 parts of air. Now naphtha consists chiefly of benzin, which, as was stated in a former paper, causes insensibility when less than a grain of it is diffused in each hundred cubic inches of the

respired air. Professor Graham ascertained that hydrochloric acid gas promotes the oxidation of phosphorus in the air; and I find that the vapour of chloroform does not prevent it: this is probably due to the chlorine it contains in such large quantity.

Professor Graham states that olefiant gas prevents phosphorus and hydrogen from uniting with oxygen without undergoing any change itself. This is exactly analogous to the action of ether and chloroform in the human body, which, as shown before, produce their effects, and pass off unchanged in the expired air.

Having traced the narcotic action of ether and other bodies to the more general law of their power of preventing oxidation under a great variety of circumstances, the mind naturally inquires by what kind of power oxidation is thus prevented. I feel considerable diffidence in offering a theory on a subject which falls as much within the domain of ordinary chemistry, as within that of physiology; when so eminent a chemist as Professor Graham has investigated a number of its details without suggesting any general explanation on the matter. However, as I have formed a theory in my own mind, I offer it for consideration: it is to the following effect:—That chemical attraction or affinity is a constantly acting force, by which each atom of matter exerts an influence on all other atoms within the sphere of its attraction, whether they are of the same or of a different kind, the force of the attraction varying with the respective nature of the substances, and the physical conditions in which they are placed. In this point of view, it will be seen that any two substances in a condition to unite together might be prevented from doing so by the intervention of a third body possessing a sufficient attraction for either of the others; and it would not be necessary that this third body should itself enter into chemical combination; for a balance of forces might be established, so that the three substances would remain exerting reciprocal attractions for each other, but unable to enter into more intimate union.

In the instances of prevented oxidation previously considered, the interfering substances no doubt owe their influence to their attraction for oxygen.

* Quarterly Jour. of Sc., 1829, part ii. p. 354.

† Op. cit.

‡ See MED. GAZ., vol. xxxix. p. 383.

These substances, in fact, are known to possess a strong affinity for oxygen, being nearly all of them highly combustible. Those of them which have the greatest power in preventing oxidation—as olefiant gas and benzin—contain no oxygen in their composition; whilst the oxide of ethyle, which contains rather more than one-fifth of its weight of oxygen, has less power; and alcohol, which consists of oxygen to the extent of rather more than one-third, has much less power than ether as a narcotic, as an antiseptic, and in preventing the oxidation of phosphorus. The salts of ethyle, without oxygen, produce narcotic effects also in much smaller doses than its oxygen salts. It was previously shown that the narcotic powers of the ethers and other allied agents was in the inverse ratio of their solubility in water,—a generalization which is in perfect accordance with what is now stated; for it so happens that the agents of this class which contain oxygen are more soluble than those which do not.

As regards their application to the substances when acting as narcotics, the views just explained may be thus briefly stated. When absorbed into the blood, they have an attraction for the oxygen dissolved in it; and though unable to combine with the oxygen under the circumstances, the attraction is sufficient to counteract that existing between the oxygen, on the one hand, and certain constituents of the blood and tissues of the organs, on the other; and thus the combinations between the respired oxygen and the materials of the body—those changes which are, in a manner, the essence of all the animal functions—are prevented more or less completely, according to the dose of the narcotic.

There is a curious circumstance connected with the oxidation of phosphorus, to which it is necessary to allude. Professor Graham found that pure oxygen has no action on phosphorus under the atmospheric pressure, at temperatures below 64° ; but that a slight expansion of the gas, by diminishing the pressure two or three inches, or diluting the oxygen with nitrogen, hydrogen, or certain other gases, enables it to act on the phosphorus, which then becomes luminous in the dark. The explanation I would offer of this circumstance is, that the attraction or affinity of the atoms of oxygen for each other is sufficient to

prevent their combining with the phosphorus until that attraction is weakened by their separation to a greater distance by the diminution of the pressure or the intervention of the atoms of another gas.

In dismissing this part of the subject I should like to remark, that whatever may be thought of the above explanation of the power by which certain narcotics retard or arrest oxidation in the animal frame, will not affect the fact of these narcotics acting in this way, for it rests on distinct evidence previously stated.

I have said nothing of the stimulant or irritant properties which chloroform, ether, alcohol, and probably all narcotics, possess in a greater or less degree, and I have not space to enter on that subject; but I expect to be able to show on another occasion, that the irritation caused by narcotics is not opposed to the view of their acting in the way explained in the previous pages.

These papers on narcotism by the inhalation of vapours have extended over a very much longer time than I expected, and I have done after all much less than I intended. In now bringing them to a close, however, it may be well to give a brief recapitulation of the more prominent points which I have endeavoured to establish.

Several experiments with chloroform and ether were described, the object of which was to determine the quantity of these agents which exists in the blood in a state of insensibility. The method employed was that of placing a small animal in a large vessel, containing a known quantity of vapour mixed with the air, and allowing it to remain till the effects of the vapour no longer increased, but became stationary; when, the solubility of the vapour in the serum of the blood being known, the quantity absorbed could be calculated from the relative saturation of the air. It was found that, with both chloroform and ether, the proportion, in a state of complete insensibility, was about one twenty-eighth part as much as the blood would dissolve. Similar experiments were made with several other substances, including some salts of ethyle, benzin, bromoform, Dutch liquid, and sulphuret of carbon, and it was found that the proportion absorbed into the blood, in causing insensibility,

was nearly the same as in the case of ether or chloroform. Hence the rule was deduced, that the narcotic strength of these substances was in the inverse ratio of their solubility. The agents to which this rule applies resemble chloroform and ether in containing carbon, and not containing any nitrogen as a radical element, and some of them were used as was described with success, in preventing the pain of surgical operations.

A description of the influence of chloroform was given, in which the effects it produces, if continued until respiration is suspended, were divided into five degrees. It was stated that when chloroform is given to animals neither very quickly nor slowly, and continued till the breathing is arrested, the heart continues to beat; but some experiments were detailed which show that chloroform is capable of arresting the action of the heart, if absorbed in sufficient quantity.

The cases of accident from inhalation of chloroform, which had happened up to the time of writing, were next considered, when it appeared that the fatal event in these cases was due to the vapour of chloroform being given in too concentrated a form, by which not only was the breathing suddenly arrested, but the action of the heart was also paralysed by the effect of the vapour.*

The opinion was expressed that chloroform, if given gradually and with due care, may be safely employed in every case in which a surgical operation has to be performed; an opinion in which I have been altogether confirmed by further experience.

Directions were next given for the administration of chloroform in various kinds of operations; the conditions and diatheses which influence its action were considered, and a numerical result of the larger operations in which I had administered chloroform or ether at that

time was given, by which it was shown that the result had been favourable.

After some remarks on the use of Dutch liquid in operations and midwifery, some experiments with alcohol were detailed, by which it was shown to resemble ether and chloroform in its effects and mode of action. Experiments were related showing that chloroform passes off unchanged in the expired air; that it can be detected in limbs amputated whilst patients are inhaling, and also in the dead bodies of animals killed by it. It was next shown that ether and alcohol can be detected in the expired air, and that the quantity of carbonic acid excreted by the lungs is diminished under the influence of chloroform and ether. For these and other reasons the conclusion was arrived at, that the class of narcotics we have been considering, and probably other narcotics also, produce their effects by virtue of a power they possess of retarding the action of the respired oxygen on the blood and tissues of the body.

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ON THE PHYSICAL DIAGNOSIS OF DISEASES OF THE ABDOMEN.

BY EDWARD BALLARD, M.D.
Late Physician to the St. Pancras Royal General
Dispensary, &c.

[Concluded from p. 1020.]

Distension of the bladder—displacement of the bladder—Hydatid cyst in the pelvis—Pelvic inflammation and abscess—Displacements of the uterus—prolapsus—displacement upwards—laterally—retroversion—anteversion—lateral version—retroflexion—ante-flexion—lateral flexion.

Distension of the bladder with urine produces on inspection an increased fulness over the pubes, which, as the enlargement of the organ increases, rises higher and higher towards the umbilicus, which in extreme cases it may reach or even surpass. Unless there be some cause of displacement conjoined, the fulness will occupy the middle line, extending from it laterally and symmetrically towards the iliac fossæ, and presenting in some cases the unmistakable form of the organ which occasions

* The fatal cases which have since happened, together with some that narrowly escaped being fatal, entirely confirm the opinion then expressed. The alarming symptoms always came on in the most sudden manner, the action of the heart being suspended without previous warning, although in some of the cases there had been at first an apparent difficulty in rendering the patient insensible. No means were used in any of these cases to insure a proper dilution of the vapour with air, a handkerchief being merely employed for administering chloroform, except I believe in one case, where it was not administered by a medical man.

it. It is unaltered by changes in the posture of the individual. Over the locality of fulness greater resistance to the hand is met with than is natural in that region, but less than would be observed were the fulness due to a solid body rising in a similar manner out of the pelvis. The elastic feel of the region also is impaired, but not wholly destroyed. Where the abdominal wall is sufficiently lax, and the muscles oppose no spasmodic action to the pressure of the hand, the form of the bladder may sometimes be traced. The tumour is superficial. Fluctuation may sometimes be perceived over a circumscribed space; it is mostly more obscure and less superficial than where the liquid occupies the peritoneum, but sometimes it has been so distinct that ascites has been believed to be present. It is not affected in its seat and extent by changes in posture. The distended bladder may be felt by examination by the rectum or vagina, before becoming apparent to the eye or hand above the pubes, as a rounded and fluctuating swelling proceeding from the forepart of the pelvis, bulging inwards the anterior walls of these canals. When the organ has passed the pubic symphysis, and come in contact with the abdominal wall, it occasions complete dulness in the corresponding part. This dulness extends upwards as high as the bladder itself in the middle line towards the navel, its lateral extent being symmetrical and proportional to its height. There is never any resonance between the dulness of the abdomen and the pubic symphysis: the upper border of the dulness is bounded by a curved line, where careful percussion will mostly elicit the "humoric sound." The position and circumscription of the dulness will be unaffected by altered posture of the patient, and consequently, when the patient is placed upon the side, the corresponding flank will remain resonant unless other disease be present to interfere with the sign. Depression of the wall with the pleximeter will fail to elicit any intestinal resonance over the dull portion of the abdomen.

The bladder may be *displaced* as well as distended. It may form a tumour lying altogether on one side of the median line, or even in the iliac fossa, and at the same time no tumour may be felt through the vagina which can

be determined as belonging to this organ. The passage of a catheter in such a case will indicate elongation with altered direction of the urethra, and by evacuating the urine demonstrate the nature of the abdominal tumour. Another displacement deserving notice is downwards, accompanying a prolapsed uterus, and forming a tumour external to the vulva, varying with the degree of fulness of the bladder, dull, and sometimes fluctuating. It may either lie and exhibit its dulness and fluctuation in the general pouch formed by the extrusion of the uterus, or it may exhibit a distinct swelling or bulge between the cervix uteri and the pubic arch. In any case the catheter will show an altered direction of the urinary meatus backwards and downwards.

A hydatid cyst occupying the pelvis is liable to be mistaken not only for a bladder distended with urine, but for other tumours of pelvic organs. It may thus occasion hypogastric fulness, and form a palpable tumour rising above the pubes. It may also project inwards the anterior wall of the rectum. The resistance it offers to the finger on examination through the rectum is greater than that occasioned by a distended bladder, its form and the position of its dulness in respect of the median line are less symmetrical, and catheterism shows that the urethra is altered in direction upwards and forwards, while no diminution is effected in the bulk of the enlargement, unless a distended bladder be conjoined. Fluctuation may be absent, or only be felt indistinctly through the rectum. The diagnosis would be rendered more precise were the hydatid fremitus perceptible, and were similar tumours discovered in connection with the liver or elsewhere in the abdomen. When occurring as it occasionally does in the recto-vaginal pouch of the female, the diagnosis from ovarian disease occupying the pelvis only, can scarcely be made by the aid of the physical signs alone; the history and progress of the case must be carefully considered as elements in the diagnosis.

Pelvic inflammation and pelvic abscess are the terms commonly applied to these states, as affecting the subperitoneal cellular tissue included within the fold of the broad ligaments of the uterus, covering this organ and its appendages,

and the parts adjacent to the generative organs. This condition is observed, not only as a sequel to delivery, but independently of parturition or pregnancy. It very commonly involves more or less the ovaries or Fallopian tubes themselves, and where suppuration occurs the abscess may extend in almost any direction along the pelvis, or the cellular inflammation may be accompanied or followed by the effusion of the products of inflammation on the free surface of the peritoneum, or by the formation of adhesions between the pelvic viscera. The earliest physical indication of this disease is mostly obtained by vaginal examination. On pressing the finger against the wall of the vagina laterally or posteriorly near its attachment to the cervix, an unusual sense of resistance is perceived, and a "brawny hardness" which permits of no yielding to the finger. In many cases this is undefined, but in others a distinct tumour may be traced, either firmly connected with the body of the uterus, or apparently belonging to it. It may appear to be fixed to the rectum, and examination by this canal may show that it is pressing on its anterior wall. When only one ligamentum latum is affected, the body of the uterus may be drawn over to the affected side; but other displacements of the organ may occur according to the seat and extent of the abscess. In all cases, however, the uterus acquires remarkable fixity, being incapable of elevation by pressure made upon the cervix. The tumour is mostly immoveable also. In some cases no indication of tumour is afforded by this method of investigation, or the signs enumerated present themselves subsequently to the occurrence of tumour above the pelvis. On the other hand, throughout the affection there may be no sign appreciable by examination through the abdominal parietes, all the physical indications being confined to examination through the vagina or rectum. When they do present themselves, however, the first indication consists in muscular resistance to pressure over the hypogastrium, or over one or other of the iliac regions; and at a subsequent period there is perceived some fulness on inspection, and a hard and tense smooth tumour is felt in one of these situations, which appears to rise from the pelvis, or to be connected with

its posterior wall. At first it may be ill circumscribed, its circumscription increasing with its size. It is unaltered by the operation of purgatives. The abdominal parietes are freely moveable over it, and if it rise high enough the tumour itself is capable of some movement by the hands. When there is also a tumour felt by the vagina, an impulse upon the tumour above the brim of the pelvis may be transmitted to the finger placed on the tumour within the vagina. The abscess may burrow along the iliac fossa, and form a tumour rising even as high as the umbilicus. Fluctuation may be perceived in the tumour; either through the abdominal wall, vagina, or rectum, in an advanced stage of the abscess. The abscess may point and burst in various situations; a common situation is into the vagina near its attachment to the cervix, or into the rectum. It may point externally on the abdominal wall, sometimes preferring the external inguinal or crural ring; the swelling in these situations may even have an impulse communicated to it by coughing, just as occurs with a hernial protrusion, from which the dulness on percussion will at once distinguish it. There is dulness on percussion over the surface corresponding with the abdominal tumour, which is unaltered by changes in the posture of the patient. In some cases peritoneal friction may be felt and heard.

Displacements of the unimpregnated uterus are of three kinds. In the first, the entire organ undergoes a change in its position in the pelvis; with only secondary alteration in the direction of its axis; in the second, the axis of the organ is remarkably changed in direction; and in the third, the organ is flexed in such a manner that the axis of the cervix and that of the body do not correspond, but form an angle the one with the other.

a. *True displacements.*

b. Displacement downwards may occur in various degrees: when the organ still remains within the pelvis, but only occupies a lower level than customary; the altered position is called *prolapsus*; but when the whole organ or a part of it escapes beyond the vulva and lower boundary of the pelvis, it is distinguished as *procentia*. Displacement without extrusion may be to a very

slight amount, or it may occur in every degree short of procidentia. According to the degree of descent of the womb, there may be observed some unusual flattening to the eye or hand above the pelvic brim, unless this sign be destroyed by such additional causes as ascites or intestinal flatulence. The direct method of ascertaining the prolapsus is by vaginal examination. It is then discovered that the os and cervix uteri are unusually soon arrived at by the finger, sometimes being found lying at the entrance of the vagina. The vagina itself is found loose, broad, and lax, and partially inverted in such a manner by the descent of the womb as to allow of the finger being carried upwards beyond its attachment to the cervix, and by the side of the body of the organ. Unless in cases where some additional impediment is offered, pressure on the uterus, especially if aided by a recumbent posture, will raise it more or less readily to its natural position, and, if it be not enlarged, without any remarkably increased sense of weight. On resuming the erect posture, however, the womb soon again descends. According as the uterus descends towards the vulva, the direction of its axis is slightly changed in order to correspond with the axis of the outlet and pelvis, and as a result of its new position. In procidentia, more or less of the uterus forms a visible projection from the vulva, and at its lower extremity the os uteri and cervix are readily recognised. A fold of the inverted vagina may lie anteriorly and posteriorly; the former containing a portion of the bladder, the latter a portion of the rectum. In complete procidentia, a large tumour is visible hanging between the thighs, whose outer surface is the inner wall of the vagina. The tumour or sac thus formed may contain not only the uterus, whose size and form may be detected by handling the part, but also the bladder, the rectum, small intestine or ascitic fluid, each of which may be ascertained by appropriate physical examination.

2. *Displacement upwards* only occurs as the result of pelvic diseases, which force up the uterus contrary to gravity, or of traction, the effect of the rise of tumours, more or less naturally or morbidly connected with it, out of the pelvis into the abdomen. In all cases the vagina is perceived to be elongated, and for the

most part also to be greatly narrowed: the finger passing for a long distance along the canal before it reaches the os uteri, which in some instances cannot be reached at all. Examination by the rectum fails to discover the uterus in its natural position, but it is felt at an unusual height, or not at all. On passing a catheter into the meatus urinarius, that canal is also perceived to be elongated, and directed unusually upwards and forwards. When, in these cases, the uterus preserves the inclination of the axis of the pelvic inlet, the organ can sometimes be perceived by the hand above the pubic symphysis, capable of being moved in any direction, and dull upon percussion. There may be also a little increased fulness above the pubes. Where the diagnosis is difficult, assistance may be gained by the use of the uterine sound, which, when introduced through the os, passes upwards and forwards in the direction of the inlet of the pelvis; and, if the parietes of the uterus and abdomen be not thick, its point may be felt through them above the pubes, indicating the seat of the fundus. When the uterus is not adherent in its new situation, the tumour felt above the symphysis may be perceived to move coincidentally with the handle of the sound.

3. *Lateral displacement* presents no tumour either in the vagina or above the pubes; the cervix is not necessarily either above or below its natural elevation, presents the correct direction of its axis, but lies on one side of the middle line. It only occurs coincidentally with pelvic disease shortening the lateral ligament of one side, or pressing the organ out of the middle line.

b. Inclinations or Versions of the Uterus.

1. *Retroversion*.—It has already been alluded to that the uterus acquires some inclination backwards in prolapsus, but retroversion may occur to a far greater extent without any or very little descent of the organ, although it must be kept in mind that prolapsus may be conjoined with the most complete retroversion. In some few instances slight flattening above the pubes may be observed, and sometimes also the posterior wall of the vagina may partly appear externally beyond the vulva. The displacement, however, can only be fully determined by vaginal examina-

tion. There is then felt through the posterior wall a solid, convex, smooth, and resistant tumour, which, unless adherent, or where faecal accumulation has occurred in the rectum above it, is somewhat moveable, but not to any great extent. On examination by the rectum a similar tumour is felt through the anterior wall, and this may be embraced, and its thickness judged of, by the introduction of a finger into each canal simultaneously. The canal of the rectum is narrowed opposite the tumour. No solid tumour will be discoverable above the pubes, or at all events none which can be traced to the fundus of the uterus. The cervix uteri will be felt to have assumed a new direction, no longer directed downwards in the axis of the pelvis, but tilted upwards and forwards into a horizontal position, or even one in which the os is directed upwards towards the upper part of the pubic symphysis, or so as to lie above it. The relative level of the fundus and cervix uteri will thus vary with the degree of version; in the slightest degree of retroversion the fundus occupies a level above the cervix; in higher degrees they lie on the same horizontal plane, and, in the highest degree, where the os lies behind the pubic symphysis, the cervix is above and the fundus below. In some cases of the latter kind, the finger cannot be made to reach the os uteri at all, and the vaginal and urethral canals are elongated and directed upwards and forwards, as in the upward displacement of the uterus. The position of the cervix in retroversion is such as to interfere with the due evacuation of the bladder, so that the signs of retention of urine, and distension of the bladder, are commonly conjoined. When pregnancy or any other cause of uterine enlargement accompanies retroversion, the tumour within the pelvis will of course be much larger than when these conditions are absent, and may even fill the greater part of the cavity of the pelvis.

2. *Anteversion.*—In this displacement, again, the uterus assumes a horizontal position, but the os and cervix are directed backwards and upwards towards the hollow of the sacrum, while the fundus is to be felt as a rounded tumour through the upper part of the wall of the vagina. The posterior wall of the vagina is much stretched, and

some difficulty is often experienced in arriving at the os uteri. The cervix may be felt in its new position through the anterior wall of the rectum. When the abdominal parietes are sufficiently lax, the hand pressing downwards behind the pubes, and the finger in the vagina, may embrace between them the body and fundus of the organ. The tumour is moveable, unless adhesion has occurred.

3. *Lateral version.*—In this form of displacement the fundus of the uterus lies towards one side of the median line, while the cervix and os are directed towards the opposite. So long as the uterus lies at its natural height in the pelvis, this can never occur to any great extent, and is only to be detected by the altered direction of the body and cervix as perceived by vaginal examination, and by the use of the uterine sound. When there is also upward displacement of the organ, it can occur to a much greater extent. In such cases, if the os be low enough to be reached, it is perceived inclined to one side of the inlet of the pelvis, or, at all events, to one side of the median line. The rounded fundus is not felt in the median line above the pubes, but at one side of the hypogastrium, into which situation it has been pushed by some tumour, which has been the cause also of the elevation of the entire organ. The uterine sound furnishes, if requisite, additional evidence of the position and direction of the fundus; and by means of this instrument, or by handling externally, the organ will be found moveable, or may even be restored to its natural position in the median line.

c. *Flexions of the Uterus.*

1. *Retroflexion.*—As in retroversion, a tumour with similar characteristics is formed by the fundus of the uterus behind the posterior wall of the vagina; but the cervix either retains its natural direction, or, when the angle formed between the body and cervix is small and acute, it may be directed somewhat backwards; or, when large and obtuse, slightly forwards; in which latter instance the retroflexion is conjoined with some retroversion. By passing the finger along the cervix posteriorly, it distinguishes the angle formed between the two portions of the uterus. In some cases, the

tumour of the fundus may only be capable of detection by examination through the rectum. On passing the uterine sound through the os, it takes a direction at first upwards in the axis of the cervix, and then downwards and backwards in that of the body and fundus; through the wall of which its point may be felt by the finger, either in the vagina or the rectum. Distension of the bladder is in pure retroflexion not observed.

2. *Anteflexion*.—In this form of displacement, again, the cervix is felt in its natural position, unless anteversion be conjoined. By passing the finger along the anterior surface of the cervix, its point can be introduced into the angle formed between the cervix and the body; and, as in anteversion, the body can be felt through the anterior wall of the vagina, and can be raised by pressure of the finger. This, however, cannot be effected where the anteversion is due to an organic contraction of the anterior part of the uterus; and, in a recorded case of this kind, in which it was conjoined with prolapsus, the os uteri was even felt to be directed forwards. If requisite, the uterine sound may be used, as in retroflexion, to determine the altered direction of the cavity of the body of the uterus.

3. *Lateral flexion* is marked by similar signs to lateral version; the only difference being that the os and cervix retain more or less their position in the median line. When conjoined with much upward displacement, the finger cannot reach high enough to appreciate the angle formed by the cervix and the body, and the uterine sound must be employed to establish the diagnosis.

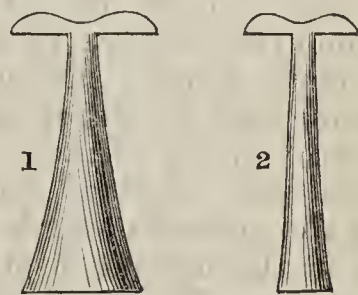
42, Myddelton Square.

SUGGESTED IMPROVEMENTS IN THE FORM OF THE STETHOSCOPE.

BY STANHOPE T. SPEER, M.D.

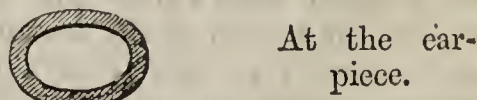
THE difficulty not unfrequently experienced in examining with the ordinary stethoscope the chest of a person in whom, whether from great emaciation, or any other cause, the ribs are very prominent, has of late struck me forcibly, and has been more prominently brought before my notice from happening to

have at one time four cases of thoracic affection, in all of which there was great difficulty in making an accurate examination of the chest with the ordinary stethoscope, which in such cases (unless some intervening body be placed between it and the ribs) usually allows air to get within its cavity. Bearing this in mind, it struck me that an instrument might be made, having the ordinary bell-shaped mouth, modified in such a manner as to enclose a sufficiently large column of air, and at the same time to fit accurately into the spaces between the ribs. For this purpose, I made a drawing of a stethoscope, which I beg to enclose, and one of which I have succeeded in making of gutta percha. It differs from that usually in use, by the orifice, instead of being circular, having the shape of an almond, the bore becoming gradually more and more circular up to the ear-piece. Its application requires rather more care than the circular stethoscope, to prevent being tilted up; but, if carefully applied, it will be found to fit into the intercostal spaces with great accuracy, and thus facilitate the examination in a remarkable manner. The following is the shape of the instrument seen under two different aspects:—



1. Front view. 2. Side view.

The shape of the orifice, and its actual size, are the following:—



Since devising the above, I have been

surprised to find that a similar idea had occurred simultaneously with regard to an Italian physician of Palermo, in Sicily—Dr. Bianchi, who has forwarded a very similar one to the Academy of Medicine of Paris, and upon which Professor Piorry has been commissioned to report. As being considered worthy of notice by the first medical body in the world, I have thought it right to put forward my own suggestion, which occurred to me upwards of a month ago, and of which I then made a drawing, without the slightest idea that such a modification of the instrument had ever before been thought of.

I may add, that for this form of stethoscope soft cedar is the best material, as it is, indeed, for every other.

7, Pettville Terrace, Cheltenham,
Nov. 16th, 1851.

HISTORY OF FOUR CASES OF LARYNGISMUS STRIDULUS,

IN THE MEMBERS OF ONE FAMILY :
FATAL IN TWO OF THE CASES.

BY DR. RUSSELL,

Physician to the Birmingham General Dispensary:

EDWARD TIMMINS, aged 6 months, was brought to me with spasmodic croup, August 13th, 1850. He is the fifth child of his parents; one other only survives.

Their first child, a girl, was attacked with spasmodic croup when six months old, as she began to cut her teeth: the disease lasted about three months, often at the rate of twelve or twenty attacks in the day. She perfectly recovered; cut her teeth easily, and is now (November 1851) alive, having just escaped a very severe illness of typhus: but she is still a feeble girl, hardly able to talk well, though nine years old.

The second child was born fifteen months after the first—a boy: spasmodic croup showed itself in him when he was five months old; he died quite suddenly of the disease at the age of seventeen months, having only four teeth: from his mother's description, he had a large overhanging belly, very thin lower extremities, with a plump face and arms. He had no other illness: none of the usual infantile diseases.

The third child, a girl, born fifteen

months after the preceding, was well made and healthy. She died at ten months, of diarrhoea, then epidemic.

The fourth child, a boy, born a year and nine months after the last one, was long under me with spasmodic croup. The first attack of his disease occurred at his fifth month, as his teeth came forwards. He died at sixteen months, of the disease, having cut six teeth. He was very imperfectly developed; very thin; the cranial bones were ill-formed, and the fontanelles, especially the anterior, very large. In this respect he resembled all the other children, according to the mother's statement.

This child benefitted considerably by a prolonged administration of the tinct. ferri s. c. The diet and general management of this, as of all the other children, was of the most judicious kind; the mother is an exceedingly intelligent woman; devoted to her children, and fully alive to the first importance of proper food and management. None of the children had costive bowels.

The present child, the fifth, was born two years and a half after the preceding one. His first attack of spasmodic croup happened when he was four months old: he had begun to dribble, but there were no signs of approaching teeth. Unlike the others, he is a fine well-made plump lad, cheerful, but very passionate: he has light hair, and light blue eyes. His first attack, which occurred May 28, 1850, was a very severe one; he began to cry, then clenched his hands till the finger nails indented the palms; held his breath, cast up his eyes, and became quite straight and stiff; his face became dark purple, and his head sank in his neck. As soon as the fit passed off, he was again quite cheerful, though evidently tired and languid: the second fit happened August 12; it was slight, but was followed, in an hour, by the third, a fit of great severity, like the first one, but like it differing from the fits of the other children, in the absence of the *crowing inspiration*. He is cutting two upper incisors; four more teeth are advancing; his bowels are costive, unlike the other children. The fontanelles normal. Chest healthy. The sternal region clear on percussion. I ordered the gums to be lanced; gave some alterative medicine, and directed the larynx and soft palate to be touched with the two scruple solution of nitrate of silver, acting on

the suggestion made by Mr. W. H. Partridge, of this town. The operation of touching the throat seemed to afford relief to the child: he had no more fits until October 7th, when he fell into one, still without croupy breath, after having been in a violent passion. There were no indications for treatment; I merely renewed the use of the nitrate of silver.

October 17th.—Had had two or three fits; he is now suffering from violent paroxysmal cough; on examining the interior of the throat, I found the mucous membrane pale and relaxed, and the uvula very long. I obtained the assistance and advice of my friend Mr. Bindley, and the elongated uvula was effectually shortened by him: the portion amputated consisted simply of thickened epithelium. A tonic treatment was continued for some time, first of the extract of cinchona, and afterwards of iron.

The cough continued, notwithstanding that the uvula remained permanently diminished to natural dimensions, and fits of a slight character were frequent. On November 1st, he had three of very great severity, but, after the application of a blister to the chest, for two hours, lancing the gums, and again using the solution of nitrate of silver, the cough entirely left him, and the fits were checked. On November 30th, however, he had a succession of attacks of croupy breathing, subsiding with copious discharge of wind. During the present year he has had four or five fits in all; the last one on May 7th. He is now a hearty lad, runs alone easily, but is still violent in his temper.

The parents are both healthy; the mother an exceedingly nervous woman; the families of both are healthy. The mother, during her second, third, and fourth pregnancies, had bloody discharge up to the time of quickening; and she was pregnant during part of her second and third lactations. She had ceased to suckle before conception in this last pregnancy, and, during the period of gestation, was free from discharge; but she suffered from menorrhagia during the first three months of suckling. She had lately been confined with a sixth child, a puny ill-developed little creature, which will probably make an addition to the foregoing list of sufferers from spasmodic croup.

Although I do not give credit to the

caustic solution for destroying the disposition to these fits, which I think can only be referred to gradual increase and physical and nervous vigour, as the child became developed, yet I think it exercised a beneficial influence during the occurrence of the attacks, rendering them less frequent and severe.

A SUCCESSFUL CASE OF PARTURITION,

IN A PATIENT WHO HAD PREVIOUSLY
UNDERGONE "OVARIOTOMY" BY A
"LARGE INCISION."

By JOHN CROUCH, Esq. M.R.C.S.

Bruton, Somerset; formerly House-Surgeon to
the Winchester Hospital.

(*Read at the Royal Medical and Chirurgical Society of London, on Tuesday,
November 25th, 1851.*)

[Communicated by SAMUEL SOLLY, Esq. F.R.S.
F.R.C.S., one of the Vice-Presidents.]

FANNY GOULD, the subject of this case, is now a fine healthy young woman, twenty-six years of age. In August 1849, I extirpated, by a peritoneal section of nine inches, a multilocular ovarian cyst, weighing fourteen pounds, and containing not less than two hundred separate cavities. The operation and its subsequent treatment are described in the 44th volume of the LONDON MEDICAL GAZETTE, and in the Provincial Medical and Surgical Journal for 1849. The tumour consisted of an hypertrophy of the left ovary, the cells of which contained an albuminous fluid of various consistencies. The fimbriated extremities of the left Fallopian tube were also much enlarged, and contributed a considerable portion towards the diseased mass. The patient's history from the above period is as follows:—About five weeks after the operation she walked the distance of five miles, to inspect the preparation of the tumour which had been extracted from her. During the winter the catamenia appeared at regular intervals, and her general health continued good, with the exception of an occasional pain in the left groin, and a slight difficulty in micturition, sometimes followed and relieved by a muco-purulent discharge in the urine. In April 1850, she fulfilled an engagement made before the operation, and entered the married state. In

January 1851, the menses ceased, and in a short time subsequently the ordinary symptoms of pregnancy commenced. These were of a mild and healthy character—indeed, she never enjoyed existence more than during her period of gestation. The pain in the left groin, opposite the part where the pedicle of the tumour had been tied, the difficult micturition, and the deposit in the urine, entirely ceased. On the 9th of October, 1851, two hundred and eighty-two days from the termination of the last menstrual period, she was, after a lingering labour, safely delivered of a male child, weighing seven pounds. The infant was born in a state of asphyxia, with the umbilical cord tightly encircling its neck; but soon after the pressure was removed, it showed symptoms of vigorous life. One fact, connected with the cicatrix on the abdomen of the mother, is not unworthy of notice. It was previously feared that the expansive powers of the parietes of the bowels would be impaired by so large a scar passing through their centre: I was therefore agreeably surprised to find that, not only did the surrounding skin dilate without tightness or puckering, but that the cicatrix itself increased in length *three inches*, and in breadth *one-sixth of an inch*, during the period of pregnancy; thus affording an unusual and striking instance of the elasticity of newly-formed integument.

Fanny Gould has now been confined nearly seven weeks, and both the mother and child are doing well in every respect. The cicatrix has returned to the same dimensions as before the pregnancy; being five and a half inches in length, and one quarter of an inch in breadth.

Bruton, Nov. 26th, 1851.

CASE OF
SUDDEN DEATH FROM SPONTANEOUS RUPTURE OF THE
UTERUS.

By F. H. WARREN, M.R.C.S.

I BEG to record in the pages of your journal, the following particulars of a case deeply interesting, and, happily, of most rare occurrence.

On the evening of October, 30th ult.,

shortly after 9 o'clock, I was requested to visit immediately the wife of a tradesman, who resided at a short distance from my house. I was informed that she had been in perfect health to within a few minutes of my being sent for. That she had suddenly complained of intense pain of the stomach, and had become faint and sick. I found her lying on her side in bed; her knees drawn up, suffering from excruciating pain in the upper part of the belly, with a constant disposition to vomit. Her pulse small and rapid, and the surface of her body universally cold.

I ascertained from her that she considered herself to be about three months gone with child, but there was no indication or symptom whatever of threatened abortion. She told me that she had eaten very heartily of boiled tripe, a few hours before, and although I had strong misgivings, I yet *hoped* that her symptoms might be produced by the pressure of this hard indigestible substance in the stomach. I ordered full doses of opium for her, with warm external applications, and left her.

At 11 o'clock P.M., I again visited her: she was then in a state of excessive prostration, her face blanched, her pulse scarcely to be discerned, restless, yawning, in fact dying, and evidently from internal hæmorrhage. I found that she *now* complained of occasional pain in the back, but she still referred to her stomach as the principal seat of her agony. I requested a female friend to examine her, but there was no vaginal discharge whatever. I continued with her until half-past one o'clock, expecting every moment that she would expire, but she survived until three o'clock, A.M. (31st Oct.) Her death thus taking place six hours after the commencement of her illness.

In consequence of reports which arose, an inquest was deemed necessary, and the body was examined by me on Sunday, Nov. 2nd.

The external appearance denoted a bloodless condition.

I opened the abdomen and found an immense clot, which extended entirely over the surface of the viscera, concealing everything from view. I removed this, together with a large quantity of fluid blood, which nearly filled a large wash-basin.

At the lower part of the belly, lying on the viscera, was a *perfect* ovum, pro-

truded through a rent of the fundus of the uterus. This organ was not at first visible, having contracted firmly, and being as it were buried low in the pelvis. I placed a ligature around the vagina at its upper part, and then removed the uterus with its protruded ovum. Through the membranes, which were entire, I could see a fœtus, and judging from its size, I believe that the poor woman had advanced four months in pregnancy. The uterus itself was firmly contracted, and this would account for the absence of any sanguineous discharge externally. Its substance was excessively pale and soft; indeed, I could easily tear it asunder.

From the direction of the rent on the peritoneal surface, I am induced to believe that the organ was ruptured in an antero-posterior direction, and not transversely (I mean as regards the fundus).

On making most minute inquiry, I could not ascertain any possible cause of this accident. At the moment she was taken ill, she was sitting quietly engaged at needle-work, and had been so employed for more than an hour previously, and I can come to no other conclusion than that it was a spontaneous rupture of the uterus. She had borne one child only, was thirty years of age, and had always enjoyed good health.

Upper Paul Street, Exeter,
Dec. 4, 1851.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 11th December, 1851:—James Mudge, Bodmin—Ashby Greenough Osborn, Northampton—Henry James Gane, Bath—J. Foster, St. Kitts, West Indies.

Admitted on the 18th:—Henry John Harrison, London—Frederick Brooker Fulcher, Maidstone—Albert Taylor, Newcastle-on-Tyne—Josiah Ramskill, Leeds—Richard Evans, Devonport—Robert Brockman Newhouse, Dover—Henry Powell Bannister, London—J. M'Cann, Ireland.

MEDICAL GAZETTE.

FRIDAY, DECEMBER 26, 1851.

WITH the present number we close the forty eighth volume of the LONDON MEDICAL GAZETTE, and from this date the journal will cease to appear as an independent publication. Our readers have been already prepared for this change by an announcement which has appeared during the last four weeks in our advertising columns, to the effect that the respectable publishers of the MEDICAL GAZETTE had parted with their interest in this journal to the proprietors of the MEDICAL TIMES.

The first number of the LONDON MEDICAL GAZETTE was published on the 8th December, 1827: it has therefore had a career of twenty-four years, and we believe we are not assuming too much in asserting that no medical periodical has done more to advance the science and practice of medicine, or to inspire medical men with a kindly feeling towards each other, and with a charitable regard to each other's opinions and practice, than the journal which is now brought to a conclusion. In the address published in the first number of the MEDICAL GAZETTE, the following passage occurs:—

“In the composition of our paper, we shall endeavour to make our readers acquainted with all that is going on, whether scientifically interesting or practically useful, in medicine, surgery, and the collateral sciences.”

We may fairly appeal to the respectable class of subscribers who have supported this journal from its commencement, whether we have not acted up to the principle involved in this announcement. The improvement of professional knowledge has been our chief aim; and in this, if we are to judge by

the numerous popular and valuable courses of lectures and papers which have at different periods appeared in our pages, we have certainly succeeded. The Lectures of Dr. Watson and Dr. Pereira, published in the *MEDICAL GAZETTE*,—not to mention numerous other courses of great value,—have formed the basis of publications which have deservedly obtained for their respective authors a world-wide celebrity.

It is not our intention to enter into any comparison of this with other medical journals: let those who wish to seek the elements requisite for success or failure in English medical journalism compare them, and let each man form his own judgment. We shall only remark, without intending anything uncharitable to our weekly contemporaries, or disrespectful to the large section of professional men who have uniformly given to them their support,—that in some instances success in periodical literature may be purchased too dearly. It is a question of opinion whether a medical journal is working out its proper objects by allowing the publication of personal attacks from anonymous sources, often based, as they are, upon exaggerated, interested, or incorrect statements, and containing unjust charges and allegations which the writers would be ashamed to make if they were compelled to attach their names to them. We admit that such articles have a spirited effect, and certainly take away the imputation of tameness from any journal which regularly devotes a portion of its pages to them: they give to the periodical a saleable value, and add to the list of subscribers. Such articles may, with a few exceptions, be approved by those who do not happen to be the victims of them; but the approbation,—as indicated by the success of a journal,—with which this practice is received by the profession, shows, in the words of our address

written a quarter of a century ago, how difficult it is “to excite the attention of mankind without gratifying some of the worst passions.” We shall look in vain for the success of such a style of weekly journalism out of England. Let our readers take up any one number of Casper’s *Wöchenschrift* published at Berlin, of the *Oesterreichische Medicinische Wochenschrift* published at Vienna, or the *Gazette Médicale*, *L’Union Médicale*, or *Gazette des Hôpitaux*, published in Paris, and he will there find that these extensively circulated periodicals are entirely filled with papers and reports “scientifically interesting or practically useful in medicine, surgery, and the collateral sciences.” He will look in vain for the “lion’s mouth” in which an anonymous accuser will be allowed to make, under editorial protection, charges against a brother practitioner which he cannot substantiate.

We might say more on this subject, but our space warns us to bring these remarks to a close. Our readers are aware that the *MEDICAL GAZETTE* will be henceforth incorporated with the *MEDICAL TIMES*, and we are assured by the respectable publisher of that periodical that every effort will be made so to conduct the new journal as to secure the approbation and support of the contributors to the *MEDICAL GAZETTE*. With this assurance, and with the belief that there is a sincere desire on the part of the proprietors of the *MEDICAL TIMES* to introduce the principles of the *MEDICAL GAZETTE* into the *MEDICAL TIMES AND GAZETTE*, we recommend our subscribers and contributors to transfer to this new publication that support which they have for twenty-four years so kindly and liberally extended to ourselves.

Reviews.

Neuralgia: its various Forms, Pathology, and Treatment; being the Jacksonian Prize Essay of the Royal College of Surgeons for 1850, with some additions. By C. TOOGOOD DOWNING, M.D., M.R.C.S. 8vo. pp. 375. London: Churchill. 1851.

WE have on a previous occasion brought before our readers Dr. Downing's method of treating neuralgia by hot medicated vapours.* In the essay now before us we have the subject of Neuralgia elaborately worked out in all its bearings of diagnosis, pathology, and treatment, with ample illustrations of the author's views by a liberal selection of cases. Among the points more especially possessing novelty in this work, we may notice Dr. Downing's opinion that neuralgia "would appear to depend essentially on a *morbid excitability* of particular *nerves*, or parts of nerves, leading to *violent and painful spasm of their fibres*." This doctrine the author does not hold with implicit faith, but submits it to the judgment of his professional brethren. We invite our readers to study the author's arguments in support of his views of the pathological nature of neuralgia, as well as his statements of the beneficial therapeutic effects of the *aneuralgicon*.

In this monograph, Dr. Downing has presented an excellent digest of the literary history of neuralgic diseases, and has brought extensive personal experience to the study of this important and obscure class of diseases, whence he has deduced new and instructive inferences to elucidate their pathology and treatment.

Remarks on the Plea of Insanity, and on the Management of Criminal Lunatics. By WILLIAM WOOD, M.D. 8vo. pp. 70. London: Longmans. 1851.

WE can only briefly call attention to this well-written essay on a very difficult and important question. The author denounces the current *medical* mania of pronouncing every atrocious criminal insane, and the common *judicial* mania of testing insanity and responsibility for crime merely by the existence of a

capacity to distinguish right from wrong. He suggests that a "STATE ASYLUM" should be founded for the reception of those convicts who are now inappropriately called Criminal Lunatics. He proposes, also, that a power should exist to confine inveterate drunkards; and we would add to this class, inveterate opium-eaters. Reckless expenditure and waste, with misery, disgrace, and destruction of health, are to be regarded as necessary results of the abuse of alcoholic liquors and opium. There might be some difficulty in drawing a line, as there is every shade in tipping and opium-eating; but the safest test would be the degree of interference with the conduct and ordinary duties of the individual produced by a perseverance in such pernicious practices.

Lectures on Clinical Medicine. By J. H. BENNETT, M.D., F.R.S.E., &c. No. V. July. Edinburgh: Sutherland and Knox. London: Simpkin and Co. 1851.

It is not improbable that many of our readers have already seen this part of Dr. Bennett's lectures; but it would nevertheless be a great omission on our part, did we not pointedly direct attention to it. This Part of the Lectures is especially devoted to the "Microscope as a Means of Diagnosis." The mode of using the microscope; the best and cheapest instrument for selection; the preparation of objects; the arts of mensuration and demonstration; and, lastly, the changes produced by disease in the secretions and structures of the body, are concisely but accurately described and illustrated by wood-engravings. For the price of two shillings, the working medical microscopist may obtain in this pamphlet a most useful guide, and a safe work of reference, in aiding the diagnosis of disease. Although it forms one part of a serial publication, we think it would meet with an extensive sale if it were published in a separate form as a "Guide to the Medical Practitioner in the use of the Microscope."

An Apology for the Microscope; being the Introductory Lecture to a Course of Microscopic Anatomy and Physiology, &c. By R. B. LYONS, M.B., T.C.D., &c. Pamphlet 8vo. pp. 45. Dublin: Fannin and Co. 1851.

This lecture contains an admirable ex-

* Vol. xlv. p. 303.

position of the great benefits which must be conferred on medical science by a proper application of the microscope. The author shows that anatomy, physiology, pathology, and forensic medicine, have already made great advances from the aid afforded by this useful instrument, but he justly complains that the subject is at present not sufficiently appreciated by British medical practitioners.

Hospital and Infirmary Reports.

ST. GEORGE'S HOSPITAL.

Reported by DR. BARCLAY, Medical Registrar.

Severe Lesions of the Brain.

THE accompanying cases belong to a class very distinct from those which have been already detailed, but have so many points of similarity, that I am induced to place them together. Here there is no abscess, and little or no softening of the structure of the brain itself, found after death, but deposits of lymph and of pus on the free surfaces of the membranes. They are, in short, examples of true meningitis, and that, to all appearance, of a very severe kind.

As to their histories, it would appear that the inflammatory action had been developed first of all external to the cavity of the cranium, at the entrances of two great portals of the brain—the ear and the eye: in the one, the external ear and adjacent parts; in the other, the deep muscles of the orbit were infiltrated with pus. In the first case the order of events seems to have been—inflammation communicated from the external to the internal ear; then deposition of pus under the dura mater; and, finally, its secretion on the surface of the pia mater. In the second, the history is scarcely distinct enough to permit us to say so positively what had been its course; but the relative condition of the parts seems to indicate that unhealthy inflammation had first occurred among the muscles and adipose tissue at the bottom of the orbit, and secondarily upon the membranes of the brain, especially the arachnoid. The account given of sore-throat, which seemed to indicate the previous existence of quinsy, must have been fallacious, as the parts in that neighbourhood were all healthy.

The symptoms in the last case were such as, taken with the history given, could not

lead to a correct diagnosis during the few hours that he was under observation, and he had been so utterly neglected, that the time for observation was allowed to pass before the case was even inquired into. In the first case the relation of the symptoms to otitis had been early observed, and a correct conclusion had been so far arrived at, that the treatment had been adopted on the belief that inflammation within the cranium had followed upon that of the tympanic cavity. But the history of both is of no small importance, as indicating that violent delirium, convulsions, and coma, are not the necessary sequelæ, and, perhaps, are not the sequelæ at all of severe inflammation of the membranes of the brain. There was, indeed, no more than ordinarily attends the fatal termination of most febrile disorders accompanied by delirium. Perhaps no class of cases indicates more clearly the importance of taking into consideration the context of the symptoms, or the correlative circumstances in forming a diagnosis; and that practitioner will be more often wrong than right, who, following books instead of cases, takes the condition of the nervous or mental states as his chief indication in pronouncing on the disease under which his patient is labouring.

Margaret H., æt. 22, admitted into St. George's Hospital, under the care of Dr. Benec Jones, on 14th July, 1848. She had been under treatment for ten days previous to her admission; her general health had been good, but she had occasionally suffered from ear-ache, accompanied by discharge from the ear, since childhood. She was seized with severe pain in the left ear on the 5th, with but little fever, and a thin watery discharge. This was suppressed; the pain was occasionally very intense; the pulse rose to 120; the tongue became furred and dry, and she had distinct rigors; the stomach was very irritable, and there was occasional vomiting. The treatment had consisted in giving calomel in large doses at first, followed up for two or three days by small doses, with opium, in the application of leeches, and giving salines. The symptoms had appeared to be very much relieved, and her general state was much improved, when, two days before admission, purulent discharge had appeared from the left ear, and it had become perfectly deaf. Subsequently her consciousness had been obscured, and she had been delirious during the past night, and had vomited frequently. On admission, she could give no distinct account of herself, was confused in her answers, and lay in a semi-comatose state, from which, however, she was pretty easily roused. The discharge from the ear continued, and the neck in its neighbourhood was hot and very

painful, and somewhat tumid; the face was flushed; skin hot and pungent; pulse 108, of good strength, and rather jerking; tongue dry and furred; pupils contracted; the bowels were said to be relaxed. The mercurial treatment was resumed, as the gums were not affected, giving repeated small doses of grey powder and Dover's powder, and a saline draught, with ten grains of nitre, every four hours.

She continued in exactly the same state for two days, without increase of delirium, or the appearance of any more urgent symptoms; but, on the evening of the 16th, she became comatose, and died on the following morning.

Post-mortem examination 28 hours after death.

Body well-formed, and in good condition.

Cranium.—The skull-cap was rather firmly adherent to the dura mater. The cavity of the arachnoid contained a moderate quantity of serum; there was but little in the subarachnoid tissue, and some serous fluid in the ventricles. On removing the brain from the cranial cavity, there was observed on the left side a yellow spot about three lines in diameter, which was situated exactly over the prominence of the superior vertical semicircular canal, caused by the deposit of purulent matter beneath and in the substance of the dura mater. The dura mater lining the posterior surface of the petrous portion of the temporal bone towards the base of that process was similarly infiltrated with lymph and purulent matter; being at one point separated from the bone by this deposit, and adhering internally to the cerebellum towards the anterior part of its circumference. On examining this portion of the cerebellum, it appeared at first sight as if there were an abscess in its substance; but closer inspection proved that this appearance was produced by a furrow between two of the lobules on the under surface having been infiltrated with lymph and purulent matter. The seat of this matter appeared to be in the pia mater, as the layer which contained it could be separated from the side of the lobule bounding the fissure without materially injuring it; some of the laminae, however, in contact with the deposit were partially softened and destroyed. Two spots on the under surface of the middle lobe of the brain, corresponding to the diseased portions of the dura mater, were discoloured and somewhat softened. The rest of the brain was healthy. The cavity of the tympanum, and the mastoid cells, were filled with a yellowish concrete substance which did not appear to be serofu-

lous: there was unusual vascularity of the mastoid portion of the temporal bone; but nowhere was there any appearance of caries, softening, or necrosis. The ossicula were healthy, as well as the walls of the tympanum. Externally, below the mastoid process, and under the sterno-mastoid muscle, the cellular tissue was infiltrated with unhealthy purulent matter. The meatus auditorius externus appeared to be healthy.

The viscera of the chest and abdomen were not examined.

Richard H., æt. 39, admitted into St. George's Hospital, under the care of Dr. Page, on the 10th July, 1848. When brought to the hospital, it was reported that he had been taken ill about eleven days before admission, with inflamed sore-throat, which had soon burst, giving vent to a large quantity of matter. His eyes had become painful during the last two or three days, and had been gradually worse up to the time of his admission, when they were entirely closed: he had been for some days entirely without food, from the difficulty he had experienced in swallowing; but it was also evident that he had been completely neglected. He was unable to answer questions, or give any account of his feelings; he could not even be made to put out his tongue; and, although not noisy or talkative, he was evidently unconscious of all that was going on around him. His face presented a most peculiar appearance, from the circumstance that both eyelids were very much swollen, closed, and red, while the rest of the face was pale and cachectic. The swelling seemed to be in great measure due to œdema, because, on elevating the lid, very little inflammation of the conjunctivæ was seen existing underneath; the redness was too local and defined to be produced by erysipelas, and was supposed to be due to deep-seated inflammation.

He passed a very restless night, talked a good deal, and was constantly delirious; his speech was thick and indistinct, like that of a person labouring under sore-throat, and a brownish-coloured froth escaped from his mouth, exhaling a most offensive but not at all a gangrenous odour. The nurse reported that he had great difficulty in swallowing. The pulse was frequent and very feeble, and the skin inclined to be cold; the bowels had not acted since his admission. He could not be made to put out his tongue or answer any questions.

Bark, ammonia, and wine, were administered without apparent benefit; and next day, as he was evidently worse, and the difficulty of swallowing altogether pre-

vented any nourishment being taken, wine and arrowroot were administered by way of enema. He had, however, no interval of consciousness, and died the same evening.

Post-mortem examination fifteen hours after death.

Body rather emaciated.

Cranium.—Nothing remarkable was observed about the membranes on the convex surface. When the brain was removed from the cranial cavity, it was observed that on each side a whitish yellow part extended upwards some way along the fissure of Sylvius, meeting at the anterior part of the great median excavation of the base; a similar matter was observed on each side of the pons varolii where the crus cerebelli is entering the semi-lunar fissure. This deposit, which was ascertained by the microscope to be of a purulent nature, formed a layer investing each of the middle cerebral arteries, which were filled to the same extent by dark brown grumous fluid, or altered blood; further on, their contents being almost natural, a small quantity only of granular matter and peculiar cells being mingled with multitudes of healthy blood-discs. The parietal layer of arachnoid membrane covering the posterior part of the anterior fossæ of the base of the cranium, and nearly all the middle fossæ on each side, was lined by a thin false membrane, in which were numerous small spots of extravasated blood. It is remarkable that there was no deposit of lymph or pus in the anterior sub-arachnoid space, where it is so commonly found. Nothing morbid was found in the substance of the brain itself. On cutting into the cavernous sinus on each side, there were observed evident traces of diffuse suppuration, and on opening the orbits the same was found to have occurred in the inter-muscular adipose and areolar tissue, and the same grumous dark fluid extended from the vessels of these cavities as did from the cerebral arteries.

The *larynx*, *pharynx*, and *tonsils*, were found in their natural state; the tongue was densely furred, and the left sublingual gland indurated: a small collection of pus was discovered just below the symphysis of the jaw.

The organs in the cavities of the *thorax* and *abdomen* were healthy with the exception of the *kidneys*, the capsules of which were morbidly adherent, and several cysts were contained in their interior; they appear to have undergone subacute inflammation.

Correspondence.

THE QUERIES OF THE EPIDEMIOLOGICAL SOCIETY ON SMALL-POX AND VACCINATION.

SIR,—The importance of the subject on which I am about to address you, and the interest which it excites at the present moment, render it unnecessary that I should offer any apology for trespassing upon your valuable time and space.

What is the extent of the protection which vaccination is capable of affording against small-pox? What are the conditions which must be observed to render the operation as effectual as possible? What are the tests which should satisfy us that it has been properly performed? How much of the present mortality from small-pox is due to the imperfect performance of vaccination—how much to the neglect of it—how much, or is any, to be accounted for by its protective power being of limited duration, or by the lymph employed having been deteriorated in passing through a succession of human beings? These are a few, and a few only, of the questions which for some time past have occupied the attention of the Small-pox and Vaccination Committee of the Epidemiological Society.

To arrive at any definite and satisfactory conclusions, it was found necessary not only to re-examine existing documents, but to obtain *facts* from the experience of men engaged in practice throughout the kingdom: and one of the first acts of the committee was to draw up a set of queries for the purpose of eliciting the desired information. It was obviously most desirable that these queries should be addressed to *every* medical practitioner, and this would have been done had the funds of the society permitted. But the postage alone of 12,000 copies (a number, as I believe, considerably short of what would have been required), allowing to each paper of queries a second penny stamp to frank the return, would have amounted to £100, and would thus have absorbed a much larger proportion of the income of the society than could be spared for a single object; and the attempt was on this account obviously impossible.

The committee were therefore obliged to limit their applications to members of the profession who were known to them, and to the council, as likely to afford the information desired, to hospitals and public dispensaries, and to union medical officers as a class of men having probably

the largest experience of the subjects of enquiry.

The distribution to union medical officers, which had been suspended for a long time for want of funds, is now going on, and will soon, it is trusted, be completed. Altogether the number of papers sent out up to the present time amounts to above 1000, and to these between 250 and 300 answers have been received; *even the penny stamp affixed to each paper has failed to bring back the remaining 700 and upwards.* We have thus 700 who have been applied to and not answered; and at least 10,000 more, to whom, not from personal disrespect, but simply from want of means, no application whatever has been made.

Yet there is not one medical man in the kingdom who has it not in his power to give information worth possessing on some one or other of the points involved in this inquiry; and if the paper of queries be well examined, each would find two or three of them, at all events, to which he would be able to give an answer. The eighteenth question, for example, is one to which *every one* could reply, and if to this alone we had two, three, or five thousand answers, we should have acquired information, valuable by its extent, and by its being of that definite kind which we so much want. And I may further remark, that the important bearing of many of the facts communicated in the returns we have received has proved to us how much may be elicited by such inquiries as we have instituted, and has made us more and more urgent for additional replies, that we may be enabled to fix our conclusions on the widest possible basis.

But how are these replies to be obtained? We have ourselves no further funds to devote to this object, and without assistance, *ab extra*, it cannot be done. But with such help, and in the way I am about to point out, I believe it may be accomplished.

We feel ourselves entitled to call upon the whole profession for *their* assistance to enable us to complete labours undertaken solely in the cause of truth, which task our energies, absorb our thoughts, and trespass upon our means, but through the instrumentality of which we trust to arrive ultimately at conclusions based on irrefragable facts, which shall determine many questions now disputed. Foremost among these is that all-important one, upon which we have been lately informed (on what is generally considered high authority) that the majority of the profession in all latitudes and hemispheres are in doubt, but on which their doubts cannot be too soon set at rest,—are the advantages, present and

prospective, to be found on the side of variolous inoculation or of vaccination.

I am, sir,

Your obedient servant,

EDWARD C. SEATON, M.D.

Hon. Sec. to the Small-pox and Vaccination Committee of the Epidemiological Society.

77, Sloane Street, Dec. 17, 1851.

Proceedings of Societies.

ACADEMY OF MEDICINE, PARIS.

Dec. 9, 1851.

Abortion successfully induced the third time in a case of deformed pelvis.

M. LENOIR related the following case:—A woman thirty-five years of age, short in stature (1 metre 2 centim. = 3·343 Eng. feet), her figure much distorted to the right and posteriorly, her lower extremities much deformed. In 1846, being then pregnant for the first time, abortion was induced at the period of three months and a half, by means of a sponge introduced into the os uteri, and the administration of ergot of rye. On a second occasion abortion had also been produced at the fourth month. On admission, in the present instance, pregnancy was evident. The os uteri was soft, partly open, and situated high in the pelvis. The body of the uterus could be felt at the umbilicus. The pelvis offered the usual characters of rachitic deformity; its sacro-pubic diameter measured fifty millimetres (about two inches); its coeco-pubic measurement was eighty millimetres (slightly over three inches); the diameter of the right concavity of the pelvis was sixty millimetres (between two and three inches). It was certain, from these measurements, that delivery could not take place in the natural way. The choice was therefore to be made between the Cæsarean operation delayed to the end of gestation, or abortion to be excited as quickly as possible.

M. Lenoir decided upon that course which had already succeeded so well in the same case. A portion of sponge was introduced into the os uteri, and on the following day was replaced by a larger piece. Labour commenced on the succeeding morning, and was completed in the evening by the expulsion of a fœtus about eight inches in length.

Spontaneous development of gaseous fluid in the blood.

M. DURAND-FARDEL related the case of a lady about fifty-six years of age, who had

suffered for some time with cephalic and thoracic symptoms of no great severity, and who, whilst at Viehy, for the benefit of the waters of that place, died suddenly with oppression in the breathing on coming out of the bath. Venesection was instantly practised; the blood which flowed was of a violet colour and frothy; at one time it flowed in a jet for about five seconds, and then subsided on the escape of a bubble of gas, which had distended the vein pressed by the hand from behind. A post-mortem examination was made twenty-two hours after death. The blood was found in a frothy state throughout the body. The left cavity of the heart was emptied of blood; this cavity was hypertrophied. There was slight valvular disease.

A discussion upon this case followed; the effects of air in the vascular system were dwelt upon by several speakers, but without adding particularly to our present information on that subject.

MEDICAL SOCIETY OF LONDON.

DR. MURPHY IN THE CHAIR.

Nov. 29, 1851.

MR. B. W. RICHARDSSON, reported the particulars of a case of

Lateral depression of the left thoracic wall, with displacement and disease of the heart—Death.

The patient in whom this occurred was an unmarried lady, 45 years of age. Mr. Richardson was called to see her on the morning of Sept. 2nd, 1850, but on making the visit I found that she had been up to that time under the care of another medical gentleman, who lived at some distance. Upon learning this he declined interference, and did not therefore get an opportunity for examining the patient carefully; but a hasty glance supplied him with the following symptoms:—

The face was expressive of great anxiety, and had a dark appearance; the lips were swollen and blue, the breathing short and laborious; there was great restlessness, but the intellect was clear; the feet were cold and œdematous; the pulse irregular and at times quite imperceptible; and the beats of the heart, though feeble, irregular, and otherwise abnormal, could be heard over a very large extent of surface. Death took place about 24 hours after the visit, and by the kindness of the gentleman to whom the patient belonged, a post-mortem examination was allowed. The sister of the deceased also supplied some further particulars concerning her. She had from child-

hood been known to have some deformity of the chest, which made her bend to the left side, and prevented her from taking very active exercise; nevertheless, she was rarely out of health. The symptoms which preceded her death had only appeared a few weeks previously, and commenced with swelling of the feet, and the others before named.

The external appearance of the body was remarkable. The chest was pointed, and the abdomen was exceedingly prominent and distended, leading to the impression that there was fluid in the peritoneal cavity. The right side of the chest was not distorted, nor was the superior part of the left side; but lower on the left side, and covering a space which included the 5th, 6th, and 7th ribs, a little anterior to their angles, there was a large oval depression, cup-shaped and deep, gradually shallowing anteriorly and posteriorly. The circumference of the chest over the centre of this depression measured 25 inches. Upon opening the thorax, and cutting through the pericardium, the heart presented a very curious appearance. It was much elongated, and its position was changed; the base was pushed up into the left infraclavicular space, and the apex pointed directly towards the right shoulder; it thus lay horizontally across the chest. The organ was also enlarged, flattened, and flabby, and on cutting into it the muscular substance was found softened. It was quite empty, as its valvular apparatus presented nothing remarkable, but the various openings were greatly dilated.

On examining into the cause of the heart's displacements, it was found to arise from the depression of the ribs to which reference has been made. The 5th, 6th, and 7th ribs were bent inwards so as to form a round projection, which pressed against the left side of the heart, tilted its apex upwards and laterally, and raised the base. The edges of these ribs, at the most projecting part, were in close connection, bound together as it were, the upper one overlapping the others. On removing the heart, the lungs were found to be quite natural and full of air, so that they filled out the thoracic cavity, and buoyed up the heart; cutting the lungs away, the smallness of the thorax was plainly seen; the spine did not appear to be curved laterally, but it evidently was abnormally prominent, and on replacing the sternum and measuring from its lower tip to the vertebral column, the distance proved to be four inches. The distension in the abdomen was caused by gas, of which a considerable quantity escaped; the spleen was congested, but all the other

abdominal organs were quite natural. The brain was not examined.

The points of interest in the case, were:—1st. The mode of death. This must have been induced purely by mechanical causes. The heart, displaced and deprived of proper room for its motion, was ever contesting with the action of the lungs, especially during each inspiratory act. The organs played on together for a long time, but at last, the heart becoming dilated and softened, lost its resisting power, and finally, during one of the convulsive gasps for breath consequent upon the thoracic oppression, it became completely overpowered by the expansive force of the lungs, was flattened against the anterior wall of the chest, as found after death, and thus, with each of its sides prevented from receiving and expelling blood, its play ceased, and death by syncopal asphyxia closed the scene.

A second point of great importance was the long time during which this antagonism of the heart and lungs must have been going on, in a greater or lesser degree. This, indeed, formed the marked peculiarity of the case. Many authors have alluded to various forms of lateral thoracic depression, and Dupuytren in fact had related a nearly similar instance as regards deformity, but in all these cases the dangerous symptoms were manifest in the first periods of life. The case, therefore, is valuable as regards prognosis, by showing that life may sometimes be prolonged and enjoyed with great chest deformity. The diagnosis of this form of heart disorder could only be difficult in cases where ocular inspection of the chest was forbidden.

With reference to treatment, no suggestion offers itself. For cases such as the one related, there is, in fact, no treatment. The time of life has passed in which to employ Dupuytren's ingenious plan of anterior compression, the cause has become fixed; sooner or later one or other of the thoracic viscera must succumb, and there with life.

Dr. SNOW BECK on

Enlargements of the Uterus which remain after parturition or abortion.

The object of the author was to bring under the notice of the Society the nature of the enlargements, and to suggest a means for insuring complete contraction after expulsion of the ovum.

The symptoms were stated to be heaviness in the head, languor, debility, disturbed rest; the preceding labours having been tedious and difficult, the lochia attendant more profuse than natural, and longer tinged with blood, followed by occasional escape of small coagula after

iliac pain, the abdomen remaining larger than it would normally be: weight and dragging pains in the sacrum occurred on the patient attempting to stand.

Examination showed the uterus to be enlarged, the orifice open so as to admit the index finger into the cervical canal, strongly marked rugæ, walls soft and elastic, no tenderness on increased pulsation of the arteries.

In a uterus taken from a patient suffering from enlargement of it, who had died of typhus fever, the following condition was found:—The thickness of the walls amounted to $\frac{7}{16}$ ths of an inch, the vessels of the organ were very full of blood, the muscular tissue was developed to a medium between the unimpregnated and gravid state: no morbid products could be discovered.

With the idea that the enlarged condition was caused by deficient contraction after labour, the administration of opiates after the expulsion of the placenta was stated by Dr. Beck to be improper, and he, on the contrary, administered a combination of ergot of rye, henbane, and borax, which, although the severity of the after pains was increased thereby, insured complete and permanent diminution of the uterine walls: another advantage was, that the lochia quickly disappeared. A case was appended illustrative of the treatment recommended.

On Rupture of the Perineum and its Treatment.

Mr. J. B. BROWN read a paper on this subject. After some general observations, and a reference to the anatomy of the perineum, he proceeded to class the accidents to the perineum, from giving way of its tissues, under four distinct varieties. The first and second being but different degrees of rupture, without laceration of the muscles; the third consisting in rupture between the sphincter vagina and the sphincter ani, a fissure being thereby formed through which the author stated the child might, if small, pass. In the fourth, the muscles just named, together with the recto-vaginal septum, was torn, and thus the bowel and a vaginal tube were laid into one. In the first three varieties, drawing off the water frequently by the catheter, close apposition of the thighs, and the application of a suture or two, generally sufficed to cause union of the edges of the wound by the first intention. The last and severest requires a more complicated surgical procedure, which is illustrated by the details of a case appended.

The causes of the laceration are said by Mr. Brown to be three.

1. Sudden and violent contraction of the

uterus, taking place whilst the os externum is still undilated.

2. An unusually weak and yielding construction of the tissues composing the perineum.

3. Improper and injudicious employment of instruments.

The results of rupture of the fourth variety Mr. Brown stated to be loss to a greater or less extent of the retentive power of the rectum over its contents; deprivation of the natural support offered to the pelvic viscera by the floor of the pelvis; causing great dragging pain from the hips, and sensation of hollowness; prolapsus of the uterus and bladder, the patient being unable to stand, or use exertion of any kind.

The obstacles in the way of a cure are; the mobile nature of the structures; the necessity for functional action; the length of time that perfect quiet has to be maintained; the retraction of parts — that usually which has taken place before the operation has been attempted; the liability of irritation of internal organs; inflammation and sloughing; and the difficulty of regulating the action of the bladder and rectum.

The two following cases are given to illustrate the treatment:—

CASE I.—A lady, æt. 37, mother of seven children, suffered at the birth of her first child rupture of the perineum, after a labour of nineteen hours. On her coming under the care of Mr. Brown, there existed a rent, which extended into the rectum, a portion of the anterior wall of which organ was lost, probably by sloughing: there was a small polypus uteri, and prolapsus of the mucous membrane of the bowel. The patient had very little control over the lower gut, and any exertion caused descent of the uterus to the os externum, which circumstance had on one occasion given rise to very considerable inflammation.

The protruded membrane and polypus were removed, and two months after the patient submitted to the operation for the laceration.

On the 15th August, 1851, she was placed under the influence of chloroform by Dr. Snow, at 3 P.M.; and, having been put in a suitable position (as for lithotomy), the cicatrices on each side were pared off, together with the mucous membrane, to the extent of an inch backwards into the vagina, and to about ten inches in length from the rectum to the vagina, within the labia. The edges of the bowel which were drawn back by the absence of the anterior portion of the sphincter were also cut away.

The whole were brought together by a triple suture; two double sutures were passed deeply through both labia, and

fastened over quills externally; the lower part of the margins of the labia were stitched with five sutures. The operation occupied an hour. Two grains of opium were given, followed by one grain more at 7 P.M.

September 19th, the catamenia appeared subsiding on the 24th.

On the 20th it was thought advisable to divide the sphincter ani on one side of the coccyx, a proceeding which lessened the tension, and allowed a better apposition of parts.

By November the 1st the patient had quite recovered.

Between the last two dates, from the minute details given by the author of the paper, it appeared that on one or two occasions it was requisite to refresh and resuture the edges slightly, proceedings which answered the expectation of the operator most completely.

Great stress was laid upon the importance of repeated catheterization, and exceeding precaution against dribbling of urine into the granulating parts, together with the continued constipation of the bowels by repeated doses of opium.

CASE II.—A. J., æt. 40, patient in the Victoria ward of St. Mary's Hospital, with rupture of the perineum of two years' standing. The accident occurred from the sudden expulsion of the head of the child, together with the vectis which had been introduced to aid its delivery. Although the sphincter ani was torn through, a mucous band remained, which separated the rectum from the vagina: the power of retaining the feces was lost. The operation, which was performed on the 12th November, for the restoration of parts, resembled that in the first case, the sphincter being, however, divided at once: by the 23d, the union of parts appeared firm, and nearly complete: up to the present date all is going on well, the bowels being more perfectly under the command of the patient. No bad symptom occurred during its progress, and the recovery has been most rapid; a circumstance which Mr. Brown not a little attributed to the generous diet allowed.

Medical Intelligence.

MEDICAL BENEVOLENT COLLEGE.

WITH the view of assisting this benevolent undertaking, the medical men of Bedford held a meeting on Wednesday evening, the 17th instant, and unanimously passed the following resolutions, namely:—

1. That the establishment of an asylum

for distressed medical men and their widows, and a school for the education of their sons, is an object worthy of the cordial support of the profession, and has strong claims on the sympathy of the public.

2. That the members of the medical profession in Bedford, forming this meeting, pledge themselves by all available means to assist the accomplishment of so desirable an object, and earnestly exhort their professional brethren, and friends throughout the country, to aid them in carrying it out.

3. That a local committee be formed, consisting of the following gentlemen, for the purpose of co-operating with the central committee in London, and of receiving subscriptions and donations from the profession and public, namely:—Isaac Hurst, Esq., R. Couchman, Esq., W. Thurnall, Esq., Dr. Dick, J. Harris, Esq., W. Bailey, Esq., C. Robinson, Esq., and Dr. Barker.

4. That Isaac Hurst, Esq., F.R.C.S., be requested to accept the office of Chairman; and Dr. Barker, that of Honorary Secretary and Treasurer to the local committee.

Several donations and subscriptions have already been promised in this town and neighbourhood.

NORWICH PATHOLOGICAL SOCIETY.

At a meeting of the Society, held Dec. 18th, 1851, Dr. CROWFOOT, of Bectles, President, the following resolutions were carried:—

1. That the Members of this Society consider the system of treating diseases which has been called homœopathy, to be founded on false data, and propagated through the combined influence of ignorance and imposture. That they, therefore, believe the associating with homœopathic practitioners to be degrading to science, and dishonourable in a moral point of view, and pledge themselves on no account knowingly to meet such practitioners in consultation.

2. That this meeting sees with considerable regret, that the College of Surgeons remains apathetic in the matter of homœopathy and the systems of quackery that are prevalent in the present day.

3. That the above resolutions be published in the *Lancet*, *Medical Gazette*, and *Provincial Medical Journal*.

PRESENT TO MR. BLENKINS FROM THE ROYAL COLLEGE OF PHYSICIANS.

The President and Fellows of the Royal College of Physicians have presented to

George E. Blenkins, Esq (Assistant-surgeon in Her Majesty's 1st or Grenadier Regiment of Foot Guards) an elegant Silver Ink-stand, with a Purse of Fifty Guineas.

The anatomical and pathological preparations bequeathed to the College Museum by that great practical physician, Dr. Matthew Baillie, and mostly dissected and "put up" with his own hands, have lately been restored by Mr. Blenkins; and the College, in expression of the high sense which they entertain of his labours in their museum, for the advancement of medical knowledge; of their entire satisfaction with the result of his exertions; and more especially of the cordial good-will which they feel towards him, for the cheerful spirit and true professional energy with which his self-imposed duty was undertaken and successfully carried through, have thus acknowledged the peculiar excellence of his services.

On the ink-stand (made by Messrs. Turner of Bond Street) is inscribed—

"To GEORGE E. BLENKINS, Esq., in testimony of his skill, assiduity, and experienced judgment, in the execution of the delicate task reposed in him for the restoration of the museum (with a purse of fifty guineas). From the Royal College of Physicians, London.—Dec. 1851."

GENTLEMEN ADMITTED LICENTIATES OF THE ROYAL COLLEGE OF PHYSICIANS.

At the usual quarterly meeting of the Comitia Majora, held on Monday, Dec. 22nd, the following gentlemen having undergone the necessary examinations for diploma, were admitted members of the College:—Dr. Garrod, Harley-street—Dr. Wilks, Bethel Place, Camberwell—Dr. Bishop, Albion-street, Hyde Park—Dr. Hassall, Park-street, Grosvenor-square.

ROYAL COLLEGE OF SURGEONS.

GENTLEMEN admitted members on the 19th inst.:—Messrs. B. Kavanagh—W. T. Young—H. Greenway—L. H. Archer—D. O'Donovan—A. D. Smith—J. J. Harding—J. H. Wolstenholme—J. G. Dowse—J. Breakey—R. Wilkinson—G. P. T. Hill—J. H. Wilson—E. Clarke—J. C. Agnis—G. M. Coventry.

I.—*Suggestions for the Extension and Perfection of Vaccination simultaneously with the systematic study of Epidemic and Endemic Disease in India.* Pampt. 8vo. pp. 14. Calcutta. 1851.

II.—*Report on Cholera and Small-pox in 1849, addressed to the Members of the Central Sanitary Committee.* By S. E. HOSKINS, M.D., and THOS. L. MAUNSELL, M.D. Pampt. 8vo. pp. 31. Guernsey. 1850.

1. MR. BEDFORD'S pamphlet proposes a system, and suggests the machinery for the extension of vaccination, and the establishment of an efficient medical inspection on all matters of hygiene throughout our Indian possessions. If carried out it is obvious that very great good must result from such comprehensive measures.

2. The second publication on our list is of a local character, but contains at the same time instructive facts respecting the introduction and propagation of *cholera* into Guernsey, showing a similar history to that which has been related of its introduction into so many other places, viz:—A ship sails from a port in which the disease prevails, arrives in another sea-port with cases of cholera on board; shortly after the communication of these with them, the disease appears in the sea-port, and thence spreads, it may be much, or it may be little. The inference in this as in other cases is self-evident—personal propagation, to which the right name of contagion is denied by many.

Concurrently with the cholera, small-pox was epidemic, owing it seems to previous neglect of vaccination, which was forthwith put in practice, although obstinately opposed by the prejudices of a large number of the lower classes. The most energetic hygienic measures were adopted by the Medical Board of Health, the members of which appear to have merited the gratitude of their neighbours for their benevolent and energetic exertion on this occasion of general public alarm.

BOOKS RECEIVED FOR REVIEW.

Lectures on the Physical Diagnosis of the Diseases of the Lungs and Heart. By Herbert Davies, M.D.

A Brief Essay on the Nature and Treatment of Herniæ, or Ruptures, &c. By Daniel Tod, M.R.C.S. &c.

Neuralgia, its various Forms, Pathology,

and Treatment. The Jacksonian Prize Essay. By C. T. Downing, M.D. M.R.C.S.

Remarks on the Plea of Insanity, and on the Management of Criminal Lunatics. By William Wood, M.D.

Speech at the Medico-Chirurgical Society, with Notes, &c. relative to Homœopathy. By J. Y. Simpson, M.D.

Magnetical Currents, with a Description of the Magnetoscope. By J. O. N. Rutter, F.R.A.S.

Casper's Wochenschrift für die gesammte Heilkunde. Nos. 44 to 47, 1st to 22d November, 1851.

BIRTHS & DEATHS IN THE METROPOLIS During the Week ending Saturday, Dec. 20.

| BIRTHS. | | DEATHS. | |
|-----------|------|-----------|------|
| Males.... | 783 | Males.... | 603 |
| Females.. | 672 | Females.. | 603 |
| | 1455 | | 1206 |

| CAUSES OF DEATH. | |
|--|------|
| ALL CAUSES | 1206 |
| SPECIFIED CAUSES | 1198 |
| 1. Zymotic (or Epidemic, Endemic, Contagious) Diseases.... | 251 |
| Sporadic Diseases, viz.— | |
| 1. Dropsy, Cancer, &c. | 56 |
| 2. Brain, Spinal Marrow, Nerves, and Senses | 121 |
| 4. Heart and Bloodvessels..... | 55 |
| 5. Lungs and organs of Respiration | 252 |
| 6. Stomach, Liver, &c. | 51 |
| 7. Diseases of the Kidneys, &c. | 15 |
| 8. Childbirth, Diseases of Uterus, &c. | 12 |
| 9. Rheumatism, Diseases of Bones, Joints, &c. | 13 |
| 10. Skin..... | 3 |
| 11. Premature Birth | 0 |
| 12. Old Age | 52 |
| 13. Sudden Deaths..... | 6 |
| 14. Violence, Privation, Cold, &c.... | 53 |

The following is a selection of the numbers of Deaths from the most important special causes:

| | | | |
|--------------------|----|------------------|-----|
| Small-pox..... | 39 | Convulsions..... | 50 |
| Measles..... | 22 | Bronchitis | 105 |
| Scarlatina | 41 | Pneumonia | 110 |
| Hooping-cough.... | 25 | Phthisis | 150 |
| Diarrhœa..... | 17 | Lungs | 9 |
| Cholera..... | 0 | Teething | 5 |
| Typhus..... | 50 | Stomach | 6 |
| Dropsy..... | 27 | Liver..... | 13 |
| Hydrocephalus | 33 | Childbirth | 6 |
| Apoplexy | 20 | Uterus | 5 |
| Paralysis | 21 | | |

REMARKS.—The total number of deaths was 58 above the average mortality of the 51st week of ten previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 30.15

Self-registering do.^b Max. 59° Min. 34°

^a From 12 observations daily. ^b Sun.

RAIN, in inches, .05. — Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 2° above the mean of the month.

NOTICES TO CORRESPONDENTS.

We have to acknowledge the receipt of communications from Dr. Belcombe, Dr. Stute, and Mr. Cooper.

Mr. Solomon's letter shall be forwarded to the proper quarter.

INDEX TO VOL. XIII. OF THE NEW SERIES.

- Abdomen, Dr. Ballard on the physical diagnosis of disease of the, 101, 191, 271, 570, 705, 835, 882, 1012.
- Abortion, Dr. Beck's case of, brought on by savin, 995, 1099.
- Academy of Medicine, Paris, proceedings of the:—M. Leroy d'Etiolles on the use of twisted bougies in stricture of the urethra, 42; M. Depaul on congenital syphilis, 42; M. Villeneuve on compression of the aorta in uterine hæmorrhage, 82; M. Lenoir on variations in form and malformations of the female pelvis, 82; M. Barreswil on the tannates of quinine and cinchonine, 82; M. Orfila on nicotine, 82; M. Orfila on the properties of conicine, 218; M. Malgaigne on a new mode of treating tubercular ulceration of the testicle, 218; Dr. Langlebert on the prophylaxis of syphilis, 259; M. Londe on pellagra, 259; M. Gilbert on the therapeutic action of arsenic in diseases of the skin, 260; M. Depaul on a case of eclampsia, 301; M. Goble's chemical researches on the fatty matter of venous blood in man, 550; M. Guerin's report on sweating sickness, 550; M. Grisolles on the influence of pregnancy on phthisis, 768; M. Champouillon on the substitution of iodated oil for cod-liver, 768; M. Malgaigne on the mechanism of intestinal strangulation by diverticula, 769; M. Monneret's case of anæmia treated by transfusion of blood, 769; M. Devilliers' researches upon the antisyphilitic treatment of pregnant women, 854; M. Chevallier on the influence of the manufacture and use of oxide of zinc upon the health of workmen, 901; cultivation of indigenous opium, 901; physiological action of the interosseous muscles of the hand, 901; umbilical superfœtation, 986; M. Lenoir's case in which abortion was successfully induced the third time in a case of deformed pelvis, 1109; M. Durand-Fardel's case of spontaneous development of gaseous fluid in the blood, 1109.
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